ORDER NO. VSD9812M224A
D21

Service Manual

Volume. 1

Panasonic Mini DV DV

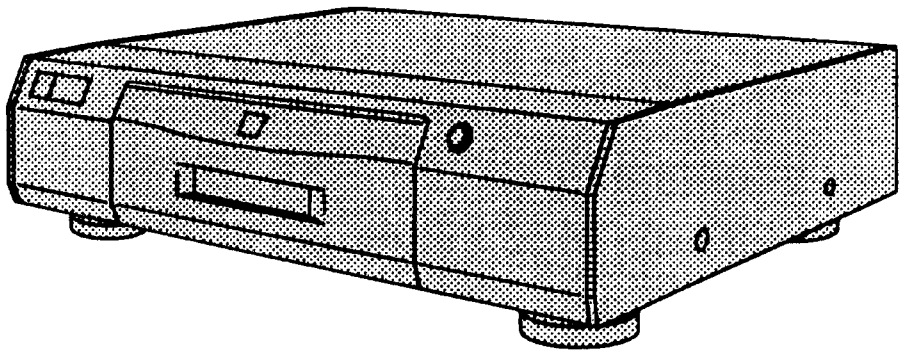
Digital Cassette Video Recorder

AG-DV2000P

Sec. 1 *Operating Instructions*

Sec. 2 *Disassembly Procedures & Mechanical Adjustment Procedures*

Sec.3 *Block Diagrams, Schematic Diagrams & Circuit Board Diagrams*



Please refer to the Service Manual Model AG-DV2000P Volume 2 (Order No. VSD9812M224B) for Service Information, Electrical Adjustment Procedures and Exploded Views / Parts List.

Weight and dimensions shown are approximate.
Specifications are subject to change without notice

Panasonic

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

AG-DV2000P

Power Source:	120 V AC 60 Hz
Power Consumption:	27 watts
Power Consumption When in Standby Mode:	Approx. 7 watts

Video Recording System:	2 rotary heads, Digital Component		
Audio Recording System:	PCM Digital Recording; 16 bit (48 kHz/2ch), 12 bit (32 kHz/4ch)		
Video Heads:	2 heads		
Tape Speed:	SP; 18.812 mm/sec.		
	LP; 12.555 mm/sec.		
Tape Format:	DV/ Mini DV tape		
Record/Playback Time:	SP; 120 min. LP; 180 min. with DV120		
	SP; 60 min. LP; 90 min. with DVM60		
FF/REW Time:	approx. 70 sec. with DV120		
	approx. 50 sec. with DVM60		
VIDEO			
Television System:	EIA; Standard (525 lines, 60 fields) NTSC color signal		
Modulation System:	Digital Compornent recording		
Input Level:	VIDEO IN;	1.0 Vp-p,	75 ohm, terminated
	S-VIDEO IN;	1.0 Vp-p,	75 ohm, terminated
Output Level:	VIDEO OUT	1.0 Vp-p,	75 ohm, terminated
	S-VIDEO OUT	1.0 Vp-p,	75 ohm, terminated
AUDIO			
Input Level:	AUDIO IN	309 mV,	more than 47 kohm
	MIC(M3);	0.33 mV,	600 ohm
Output Level:	AUDIO OUT	309 mV,	less than 1 kohm
	HEAD PHONES;	1−30 mV,	8 ohm
Audio Track:	16 bit (48 kHz/2ch);	1 track, 2 channels	
	12 bit (32 kHz/4ch);	2 tracks, 4 channels	
Digital Interface:	DV Terminal (i.LINK, 4-pin)		
Video Horizontal Resolution:	Color; more than 500 lines		
Audio Frequency Response:	20 Hz−20 kHz (16 bit)		
	20 Hz−14.5 kHz (12 bit)		
Operating Temperature:	5°C−40°C		
Operating Humidity:	35%-80%		
Weight:	14.6 lbs. (6.8 kg)		
Dimensions:	$17^{9}/_{16}$"(W)×$4^{7}/_{8}$"(H)×$13^{7}/_{8}$"(D) [445 (W)×123 (H)×351.5 (D) mm]		

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

INTRODUCTION

This Service Manual Vol. 1 contains technical information such as Operating Instructions, Disassembly procedures, Maintenance & Mechanical Adjustment Procedures and Block Diagrams / Schematic Diagrams / C.B.A. Layout and which service personnel to understand and service the Panasonic Digital Video Cassette Recorder model AG-DV2000P. For other technical information such as Service Information, Electrical Adjustment Procedures and Exploded Views / Parts Lists, please refer to the Service Manual AG-DV2000P Vol. 2. (Order No. VSD9812M224B).

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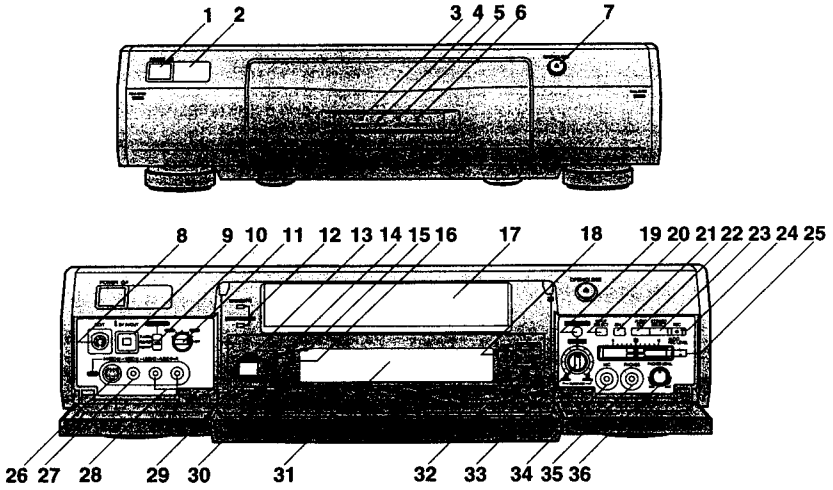
CONTENTS

SECTION 1

OPERATING INSTRUCTIONS

Control and Connection Sockets

This section gives a detailed explanation of the function of each button, switch and connection socket.



FRONT

1 POWER ⏻/I
Press to switch the VCR from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.

2 Infra-red Remote Control Receiver Window

3 STANDBY Indicator
This indicator is lit when main lead is connected and the power is off.

4 POWER Indicator
This indicator is lit when the power is on.

5 REC Indicator
This indicator is lit when recording is in progress.

6 CASSETTE IN Indicator
This indicator is lit when a cassette is inserted.

7 OPEN/CLOSE
Press to open the front panel or to open/close the cassette tray.

8 EDIT
By connecting a movie camera or VCR with an EDIT socket to this socket via an Edit cable, various kinds of editing functions can be performed more quickly and efficiently between two VCRs or between a VCR and a movie camera.

9 DV IN/OUT ( )
To connect the DV cable to digital video equipment with IEEE 1394-1995 compatible DV terminal.
"i.LINK" is the name of the connector in accordance with the International Standard IEEE1394-1995.
" " is the logo marked on products conforming with the "i.LINK" specifications. For further details on the DV terminal, refer to the Glossary of Terms on page 66.

10 EDIT MODE
PLAYER: When this VCR is used as the playback VCR during editing operations.
RECORDER: When this VCR is used as the recording VCR during editing operations.
- Normally set at this position.

PASSIVE: When operating this VCR using another VCR or an editing controller.
- The picture quality best suited for editing is selected.

11 EDIT CONTROL
To select a connected component when another component is to be connected for editing, etc.

12 DV CASSETTE/MINI CASSETTE Indicators
This indicator corresponds to the size of the cassette inserted is lit.

13 JOG/SHUTTLE Indicator
While this display is lit, the unit is set to the Jog/Shuttle mode.
- Check that the display is lit before proceeding with a jog or shuttle operation.
- The display is automatically turned off if no operation is performed.

14 VIDEO INSERT Indicator
This indicator is lit when the video insert editing is performed.

15 AUDIO DUB Indicator
This indicator is lit when the Audio Dubbing or Audio Mixing is performed.

16 AUDIO INSERT Indicator
This indicator is lit when the audio insert editing is performed.

17 Cassette Tray

18 Indicators for AUDIO MONITOR
The audio track selected by **STEREO SELECT** lights. (This applies only to a tape recorded in the 12bit audio mode.)

19 MIXING EDIT
For Mixing Editing.

20 INPUT SELECT
To select the A1, A2 or DV IN external recording source.

21 SP/LP
To select the desired tape speed for recording.

22 AUDIO OUT
To select the desired sound mode.
When this button is pressed, the audio output mode changes as follows.

→ Stereo → Left → Right →

The Left(L) and Right(R) Indicators shown which sound mode is selected in the following way.
Stereo: Both the L and R Indicators appear.
Left: The L Indicator appears.
Right: The R Indicator appears.

23 STEREO SELECT
To select the audio track (STEREO1 audio and/or STEREO2 audio) on a tape which was recorded in the 12bit audio mode. During playback, each time the button is pressed, the sound changes as follows:

→ STEREO1 → STEREO2 → STEREO1 → STEREO2 (MIX) →

- The audio track cannot be selected during the playback of a tape recorded in the 16bit audio mode.
- When **INPUT SELECT** is set to DV IN and a 12bit audio mode input signal is being received, the audio track can be selected by **STEREO SELECT** at any time.

24 REC
To start recording.

25 AUDIO REC LEVEL
To adjust the audio recording level to peak at +4 dB on the recording level indicator.
- When **INPUT SELECT** is set to DV IN the audio recording level cannot be adjusted.

26 S-VIDEO IN (AV2)
To connect the S-Video cable to a movie camera or to another VCR that has an S-Video output socket.
- If an S-Video cable is connected, other video input (AV2) is automatically switched off.

27 VIDEO IN (AV2)
To connect the video cable to a movie camera or to another VCR.

28 AUDIO IN (AV2)
To connect the audio cable to a movie camera or to another VCR.

29 EDITING CONTROLLER Socket
When using the editing controller separate from the main unit, remove the modular cap and then connect the editing controller cable.

30 DV IN/OUT Indicators
DV IN: This indicator is lit when **INPUT SELECT** is set.to "DV IN".
DV OUT: This indicator is lit when a playback operation is performed using this VCR or when **INPUT SELECT** is set to other than "DV IN".

31 Display

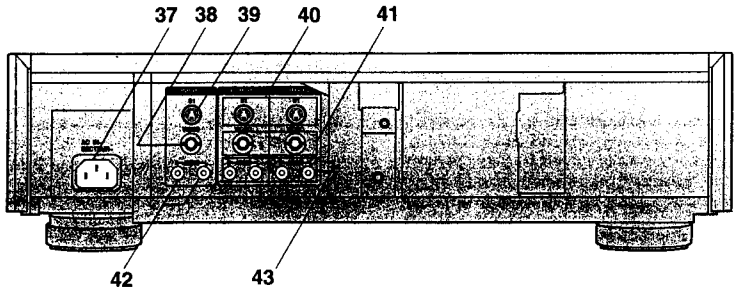
32 Indicators for AUDIO DATA
Displays the audio data that is to be recorded, or the audio data on a tape that has already been recorded. The audio recording mode can be set in the SET UP MENU.
12bit-STEREO1: To play back a tape that is recorded in 12bit audio mode.
12bit-STEREO2: To play back a STEREO2 audio tape recorded in the 12bit audio mode.
16bit : To play back a tape that is recorded in 16bit audio mode.

33 AUDIO MIX Level
During the Audio Mixing function:
To adjust the volume of the original audio (STEREO1).
During playback of a tape recorded in the 12bit audio mode:
To adjust the mix balance between the STEREO1 and STEREO2 audio.

34 MIC
To connect to a microphone for recording. Once connected, this socket has priority.

35 PHONES
To connect stereo headphones.

36 PHONES LEVEL
For adjusting the volume level of connected stereo headphones.



REAR

37 AC IN~
To connect to the main power supply.

38 VIDEO IN (INPUT1)
To connect the video cable (BNC) to a movie camera or to another VCR.

39 S-VIDEO IN (INPUT1)
To connect the S-Video cable to a movie camera or to another VCR that has an S-Video output socket.
- If an S-Video cable is connected, other video input (INPUT1) is automatically switched off.

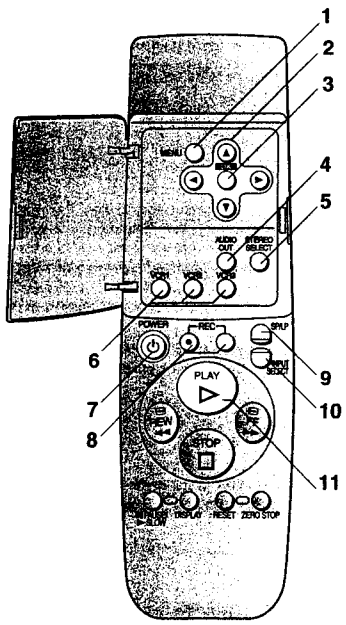
40 S-VIDEO OUT (OUTPUT1/2)
To connect the S-Video cable to a monitor or another VCR that has an S-Video input socket.

41 VIDEO OUT (OUTPUT1/2)
To connect the video cable (BNC) to a monitor or to another VCR.

42 AUDIO IN (INPUT1)
To connect the audio cable to a movie camera or to another VCR.

43 AUDIO OUT (OUTPUT1/2)
To connect the audio cable to a stereo audio system.

Infra-red Remote Controller



1 MENU
To make the On Screen Display Main menu appear on the monitor screen.

2 ▲▼◄►
To make selections from the On Screen Display.

3 OK
To confirm the selection, or to store.

4 AUDIO OUT
To select the desired sound mode.
When this button is pressed, the audio output mode changes as follows.

→ Stereo → Left → Right →

The Left(L) and Right(R) Indicators shown which sound mode is selected in the following way.
Stereo: Both the L and R Indicators appear.
Left: The L Indicator appears.
Right: The R Indicator appears.

5 STEREO SELECT
To select the audio track (STEREO1 audio and/or STEREO2 audio) on a tape which was recorded in the 12bit audio mode. During playback, each time the button is pressed, the sound changes as follows:

→ STEREO1 → STEREO2 → STEREO1 / STEREO2 / (MIX) →

- The audio track cannot be selected during the playback of a tape recorded in the 16bit audio mode.
- When **INPUT SELECT** is set to DV IN and a 12bit audio mode input signal is being received, the audio track can be selected by **STEREO SELECT** at any time.

6 VCR1/2/3
While holding down **POWER** ⏻, press one of these buttons to select the remote control mode.
VCR1: Set this position on both the VCR and remote controller for normal use with one VCR.
VCR2: Set this position when using two Panasonic VCRs.
VCR3: Set this position when using three Panasonic VCRs.
- When the VCR's remote control mode has been switched, select the same remote control mode on the editing controller as well.

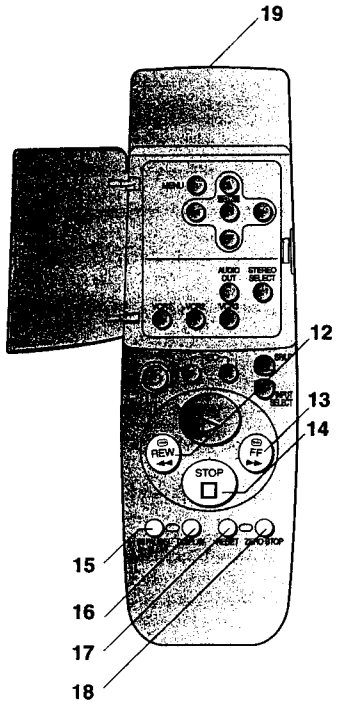
7 POWER ⏻
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still connected to the mains.

8 REC
To start recording.
Press both buttons at the same time.

9 SP/LP
To select the desired tape speed for recording.

10 INPUT SELECT
To select the A1, A2 or DV IN external recording source.

11 ▷ (PLAY)
To start playback. "▷" is lit during playback.



12 ◀◀ (REW)
In the stop mode: To rewind the tape.
In the playback mode: To search backward for a scene.
In the rewind mode: To view the video.
"◁◁" is lit during rewind.

13 ▶▶ (FF)
In the stop mode: To fast forward the tape.
In the playback mode: To search forward for a scene.
In the fast forward mode: To view the video.
"▷▷" is lit during fast forward.

14 □ (STOP)
To stop playback or recording.

15 PAUSE/SLOW (❚❚/I▶)
During playback:
- When pressed once: Still picture. "❚❚" is lit.
- When pressed for 2 seconds or more: Slow playback. "❚▷" is lit.

During recording: To pause recording.

16 DISPLAY
To change the VCR display indication as follows:

Clock → Time Code → Remaining Tape Time → Counter

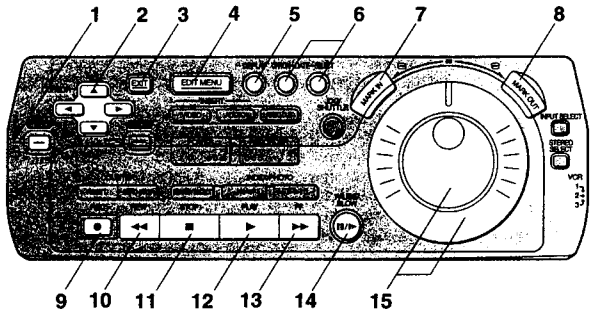
- The time code frame values are not displayed on the main unit's VCR display.

17 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.
- It is not possible to reset the Time code to "0h00m00s00f" using **RESET**.

18 ZERO STOP
For the zero stop function.

19 Infra-red Transmitter

Editing Controller



1 SET UP
To make the SET UP screen appear on the monitor screen. When the SET UP screen is displayed, use this button to return to the previous screen.

2 ▲ ▼ ◀ ▶ (CURSOR)
To make selections from the SET UP or EDIT MENU screen. (When the SET UP or EDIT MENU screen is displayed.)

3 EXIT
To exit the SET UP or EDIT MENU screen.

4 EDIT MENU
To make the EDIT MENU screen appear on the monitor screen, and to return to the previous screen. This button is also used to stop editing functions using the EDIT MENU screen.

5 DISPLAY
To change the VCR display indication as follows:

Clock → Time Code → Remaining Tape Time → Counter

- The time code frame values are not displayed on the main unit's VCR display.

6 DATE-OFF/ON, DATE-SELECT
When pictures are recorded using this VCR or a Panasonic Digital Video Camera, the date and time of the recording are automatically recorded onto the tape's sub code track.
This button is used to select the information to be displayed on the On Screen Display.

DATE-OFF/ON:
To make the Date/Time indication appear on the monitor screen.

DATE-SELECT:
To change the indication to be displayed on the monitor screen as follows:

Date → Date Time → Time

7 MARK IN
To set edit start points for Program Editing.

8 MARK OUT
To set edit end points for Program Editing.

9 REC
To start recording.

10 ◀◀ (REW)
In the stop mode: To rewind the tape.
In the playback mode: To search backward for a scene.
In the rewind mode: To view the video.
"◁◁" is lit during rewind.

11 ■ (STOP)
To stop playback or recording.

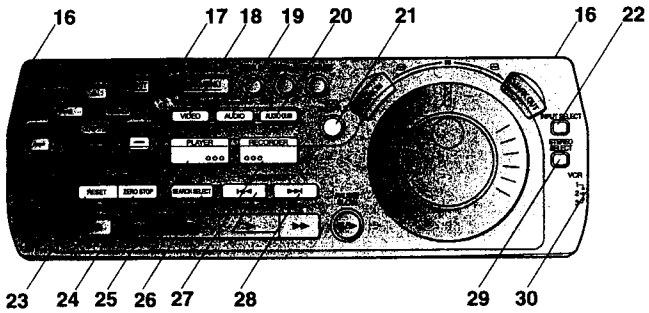
12 ▶ (PLAY)
To start playback. "▷" is lit during playback.

13 ▶▶ (FF)
In the stop mode: To fast forward the tape.
In the playback mode: To search forward for a scene.
In the fast forward mode: To view the video.
"▷▷" is lit during fast forward.

14 PAUSE/SLOW (❚❚/I▶)
During playback:
- When pressed once: Still picture. "❚❚" is lit.
- When pressed for 2 seconds or more: Slow playback. "❚▷" is lit.

During recording: To pause recording.

15 Jog Dial/Shuttle Ring
Jog Dial (Inner dial):
Operate after pressing **JOG/SHUTTLE** to switch to the Jog/shuttle mode.
To locate any desired field with utmost precision.
Shuttle Ring (outer ring):
Operate after pressing **JOG/SHUTTLE** to switch to the Jog/shuttle mode.
To adjust playback speed backward or forward.



16 Infra-red Transmitter

17 OK
To start Manual editing and to store the selection on the SET UP or EDIT MENU screen.

18 VIDEO INSERT
For the Video Insert function and the AV Insert function.

19 AUDIO INSERT
For the Audio Insert function and the AV Insert function.

20 AUDIO DUB
For the Audio Dubbing function or the Audio Mixing function.

21 JOG/SHUTTLE
To switch to the Jog/Shuttle mode. When the button is pressed, it lights and the VCR enters the Jog/Shuttle mode.
In the stop mode: Still picture (Jog/Shuttle mode).
During playback: Still picture (Jog/Shuttle mode).

22 INPUT SELECT
To select the A1, A2 or DV IN external recording source.

23 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00". when a video cassette is inserted.
- It is not possible to reset the Time code to "0h00m00s00f" using **RESET.**

24 ZERO STOP
For the zero stop function.

25 PLAYER
To operate the playback unit.

26 SEARCH SELECT
To search for a recorded program using the index/ photoshot index search.

27 RECORDER
To operate the recording VCR.

28 INDEX/PHOTO
For the index/photoshot index search function.

29 STEREO SELECT
To select the audio track (STEREO1audio and/or STEREO2 audio) on a tape which was recorded in the 12bit audio mode. During playback, each time the button is pressed, the sound changes as follows:

→ STEREO1 → STEREO2 → STEREO1 / STEREO2 (MIX)

- The audio track cannot be selected during the playback of a tape recorded in the 16bit audio mode.
- When **INPUT SELECT** is set to DV IN, the audio track can be selected by **STEREO SELECT** at any time: it does not have to be during playback.

30 VCR1/2/3
To select the remote control mode. The selected mode appears on the remote controller display.

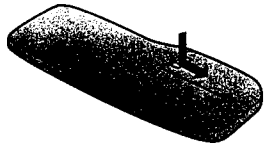
VCR1:	Set this position on both the VCR and remote controller for normal use with one VCR.
VCR2:	Set this position when using two Panasonic VCRs.
VCR3:	Set this position when using three Panasonic VCRs.

Note:
While in the editing mode the VCR's Time code or tape counter display cannot be changed.

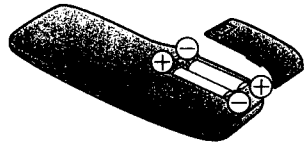
Remote Controller Setup

Installing the Batteries

1 To remove the cover, slide it in the direction of the arrow while pressing down.



2 Load the batteries with their polarity (⊕ and ⊖) aligned correctly.



3 Slide the cover back on.

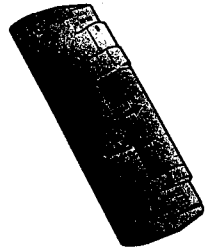
Power Source for the Remote Controller
The remote controller is powered by 2 AA, UM3 or R6 size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

Precautions for Battery Replacement
- Load the new batteries with their polarity (⊕ and ⊖) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool, dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.
- Do not use rechargeable batteries.

Editing Controller Set Up

Installing the Batteries

1 To remove the cover, slide it in the direction of the arrow while pressing down.



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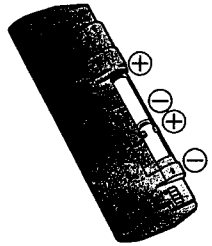

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- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.
- Do not use rechargeable batteries.

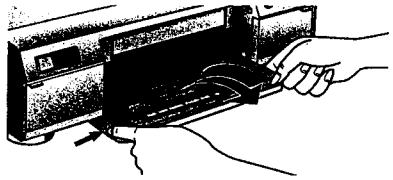
Operating the Editing Controller

The Editing controller can be operated in any of the following 3 ways:

- It can be operated while remaining attached to the main unit.
- Its batteries can be loaded, and it can be separated from the main unit and operated as the remote controller.
- It can be separated from the main unit, connected using the accessory editing controller cable and operated as the remote controller.

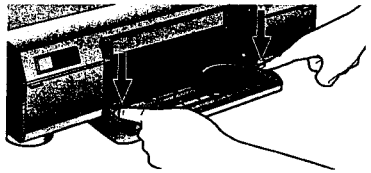
How to separate the editing controller

While pressing the buttons at the left and right of the main unit's front panel, remove the editing controller with both hands.



How to attach the editing controller

Push down on the editing controller until the areas around the left and right buttons on the unit's front panel click into position.



When connecting the editing controller to the video unit using the editing controller cable

1 Remove the cover over the controller socket on the rear panel of the editing controller, and insert the plug at one end of the editing controller cable into this socket until it clicks into position.

2 Remove the modular cap over the unit's controller socket, and insert the plug at the other end of the editing controller cable into this socket until it clicks into position.

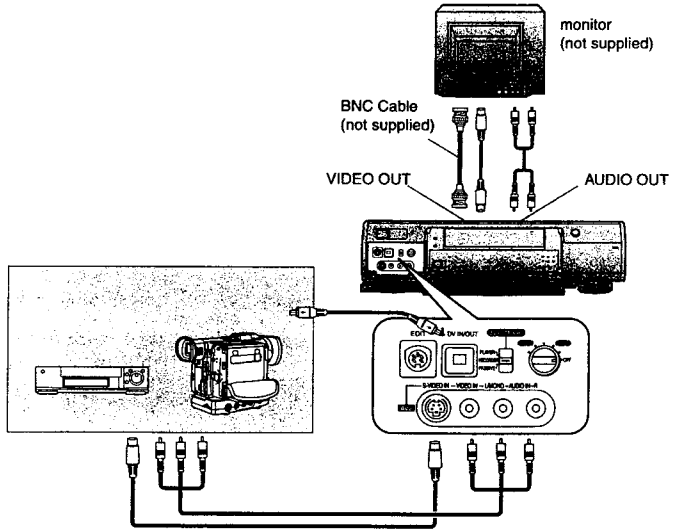
When using the editing controller as a remote controller

As a remote controller, the editing controller can be operated at a distance up to about 3 m in front and up to an angle of up to about 30 degrees to the left or right of centre. (This range changes in accordance with the ambient brightness.)

Note:

When the VCR's remote control mode has been switched, switch the remote control mode on the editing controller as well.

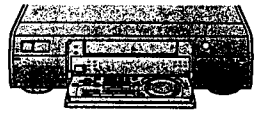
Connections



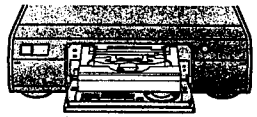
- Use AV cables to connect the input sockets on this unit with the output sockets on the video equipment.
- Press **INPUT SELECT** on this unit so that A1, A2 or DV IN is selected.
- When using the BNC socket, use a BNC-PHONO conversion adapter (sold separately).
- If the video equipment is connected to this unit via an S-VIDEO cable, the video signal on the S-VIDEO cable takes priority. If the video equipment does not have an S-VIDEO socket do not connect the S-VIDEO cable to this unit.

Inserting the Cassette

1 Press **OPEN/CLOSE.**
- The front panel opens.

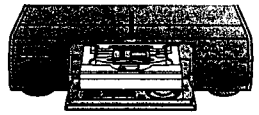


2 Press **OPEN/CLOSE** again.
- The cassette tray is extended.



3 Align the cassette with the cassette guide and place it on the tray while ensuring that the side of the cassette with the tape exposed is facing up and the label side is turned toward you.

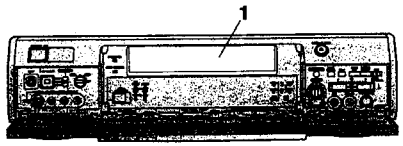
Mini Cassette

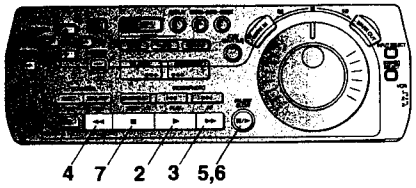


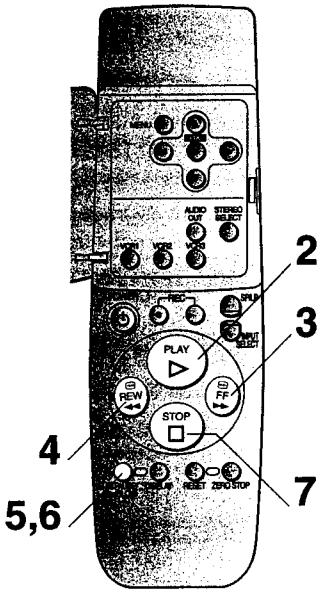
Standard Cassette

4 Press **OPEN/CLOSE.**
- The cassette tray is retracted inside the video unit.

Playback







Operations **Display Symbols**

1 Insert a recorded cassette tape (page 13).

2 Press ▷ **(PLAY)** to start playback.

3 Tap ▶▶ **(FF)** to search forward.
- Press ▷ **(PLAY)** to change back to normal playback.

4 Tap ◀◀ **(REW)** to search backward.
- Press ▷ **(PLAY)** to change back to normal playback.

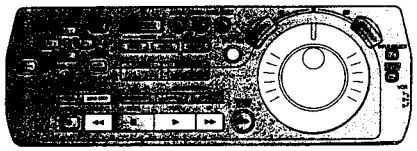
5 Press **PAUSE/SLOW** to view a still picture.
- Press ▷ **(PLAY)** or **PAUSE/SLOW** to continue normal playback.

6 Keep **PAUSE/SLOW** pressed for 2 seconds or more to view a slow motion picture.
- Press ▷ **(PLAY)** to continue normal playback.

7 Press □ **(STOP)** to stop the picture.

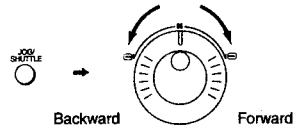
Note:
If you keep ▶▶ **(FF)** or ◀◀ **(REW)** pressed in step **3** or **4**, search playback is activated while the button is pressed, and operation returns to normal playback when the button is released.

Other Playback Functions



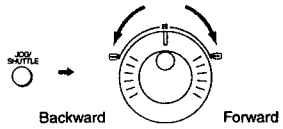
To Change the Playback Speed
1 Press **JOG/SHUTTLE** on the editing controller.
- The button on the editing controller is lit.

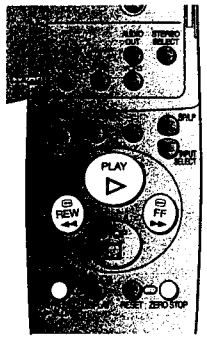
2 Rotate Shuttle Ring.



To Locate the Desired Picture Exactly
1 Press **JOG/SHUTTLE** on the editing controller.
- The button on the editing controller is lit.

2 Turn Jog dial.





To View the Video During Fast Forward or Rewind
Keep▶▶ **(FF)** pressed during fast forward.
Keep◀◀**(REW)** pressed during rewind.

To Return to a Specified Scene
After playback, press **ZERO STOP** in the stop mode.
- The tape will be rewound or fast forwarded to 0:00.00 approximately.
- During Time code display, this function will not work.

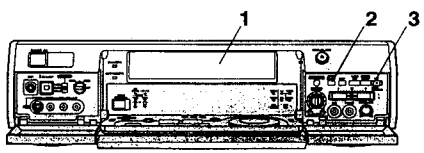
Automatic Playback
When a cassette with the opened record prevention tab is inserted, the VCR starts playback automatically.

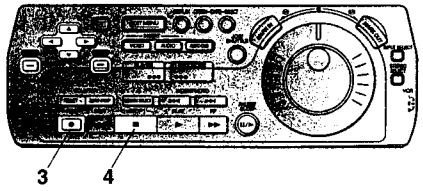
VCR-off Playback
When the VCR is off, an inserted cassette can be played back by pressing ▷**(PLAY)**.

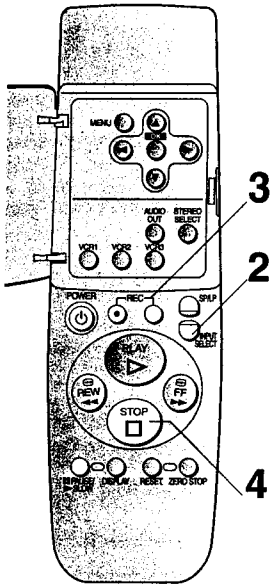
Automatic Rewinding
When the tape reaches the end during recording or playback, it will automatically be rewound to the beginning.

Note:
Cue, review or slow playback will be automatically canceled after 10 minutes, and still playback after 5 minutes.

Manual Recording







Operations **Display Symbols**

1 Insert a video cassette with the closed record prevention tab (page 13).
- If it has already been inserted, press **POWER ⏻ (POWER ⏻/I)** to turn the VCR on.

2 Press **INPUT SELECT** on this unit so that A1, A2 or DV IN.

3 Press **REC** to start recording.

4 Press □ **(STOP)** to stop recording.

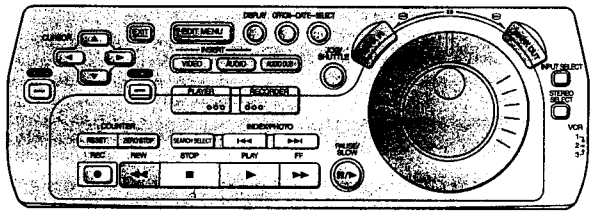
To Select the Desired Tape Speed
Press **SP/LP** before recording.

To Pause Recording
Press **PAUSE/SLOW** during recording.
Press again to continue recording.

To Select the Desired Audio Mode
Perform the procedure below using the editing controller.
1 Press **SET UP**.
2 Using **▲▼**, select **Audio Mode** and press **OK**.
3 Using **◀▶**, select **12bit** or **16bit**, then press **OK**.
For details, see Initial Settings for Editing on page 30.

Note:
A long-Mini DV cassette (SP/80 min., LP/120 min.) that was recorded by this VCR cannot be played back or recorded by a DVCPRO or DVCPRO 50 format VCR.

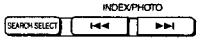
Search Functions



Index Search System
It is easy to find the beginning of each recording because a special index signal is recorded at the start of each recorded segment on the tape.

For example:
Searching for the 2nd recorded segment in the forward direction.

1 Press **SEARCH SELECT** so that "S – –" appears on the VCR display.
(This operation is performed while the VCR is in the stop mode or normal playback mode.)



2 Press **INDEX/PHOTO ▶▶I** twice.
- After finding the specific recorded segment, playback starts automatically.

Display Symbols

To stop the operation at any time
Press ■ **(STOP)**.

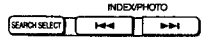
- For the reverse direction, press **INDEX/PHOTO I◀◀**.
- Up to 20 index signals can be searched for in either direction.
- When the opposite **INDEX/PHOTO** is pressed, the number shall be decreased until 1 is reached.
- The figure on the display is reduced by 1 each time an index signal is located.
- The INDEX search function can only work correctly if the index signals are spaced at least 5 minutes apart.
- Repeat the procedure if the index signal for the specified number is not found.

Recording Index Signals
Index signals are recorded in the following cases.
- When a recording is started by pressing **REC**.
- When **REC** on the remote controller or the editing controller is pressed during recording.

Photoshot Index Search System
Photo shot index signals are automatically recorded when a Panasonic Digital Video Camera is used for Photo shot Mode. Photo shot images are searched using these signals, and when such an image is located, the image is played back as a still picture.

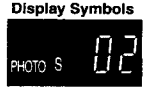
For example:
Searching for the 2nd photo shot image in the forward direction.

1 Press **SEARCH SELECT** so that "PHOTO S – –" appears on the VCR display.



2 Press **INDEX/PHOTO ▶▶I** twice.
- After finding the specific image, playback starts automatically.

Display Symbols



To stop the operation at any time
Press ■ **(STOP)**.

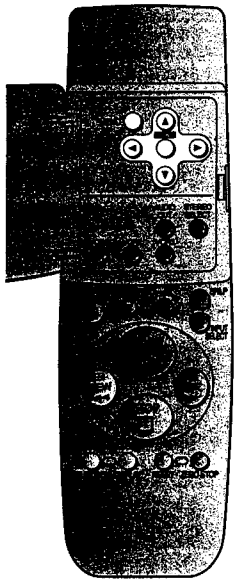
- For the reverse direction, press **INDEX/PHOTO I◀◀**.
- Any of up to 20 images ahead on the tape can be designated.
- When the opposite **INDEX/PHOTO** is pressed, the number shall be decreased until 1 is reached.
- It may not be possible to search for a particular image properly if photo shot images have been recorded continuously.
- At every press of the corresponding button, the tape is fast-forwarded or rewound to the next still picture recorded in the Photoshot Mode.
  After reaching the next still picture, the still picture is played back continually together with the sound (only for approx. 4 seconds).

Setting the Clock of Your VCR

The built-in digital clock employs the 24-hour system.

Preparations

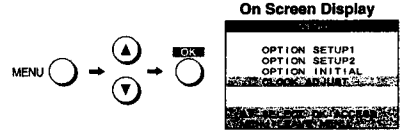
- Confirm that the monitor is on and the VCR viewing channel is selected.
- Turn on the VCR and monitor.



Operations

1 Press **MENU**, and then select **CLOCK ADJUST**.

On Screen Display



2 Set **Time** and **Date**.

- Press ◀ to return to the previous item.

3 Press **OK** to confirm.

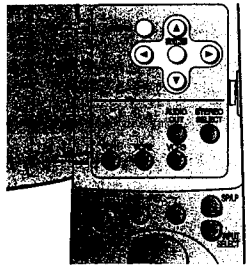
4 Press **MENU** to exit the On Screen Display.

Settings Using On Screen Display

The VCR indications shown on the monitor screen are known as the On Screen Display (OSD).
This VCR allows many settings to be made at the OSD.

Preparations

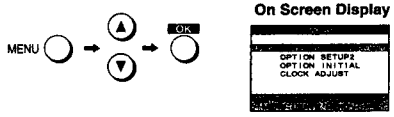
- Confirm that the monitor is on and the VCR viewing channel is selected.
- Turn on the VCR and monitor.



OSD Mode

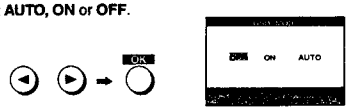
1 Press **MENU**, and then select **OPTION SETUP1**.

On Screen Display



2 Select **OSD MODE**.

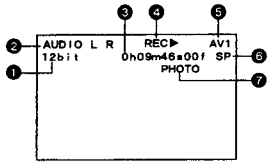
3 Select **AUTO, ON** or **OFF**.



AUTO: The On Screen Display will appear on the monitor screen for a few seconds when you operate the VCR.
ON: The On Screen Display will always appear on the monitor screen when you perform the VCR.
OFF: The On Screen Display will not appear.

4 Press **MENU** twice to exit the On Screen Display.

To use the On Screen Display:



❶ **Audio Data Indicator**

❷ **Audio Output Mode Indicator**
The Left (L) and Right (R) Indicators show which sound mode is selected with **AUDIO OUT** (see page 5 or 7).
Stereo: Both the AUDIO L and R Indicators appear.
Left: The AUDIO L Indicator appears.
Right: The AUDIO R Indicator appears.

❸ **Present time/Time code/Remaining tape time/ Tape counter/Index/Photoshot Index Search**

Present date and time	JUN 11 19:22
Time code	0h09m46s00f
Remaining tape time	REMAIN 1:16
Tape counter	−1:35.47
Index/Photoshot index Search	S 02

❹ **Tape running display**

Stop	
Playback/Reverse Playback	PLAY▶/PLAY◀
Still Playback	STILL❚❚
Fast Forward/Rewind	FF▶▶/REW◀◀
Cue/Review	CUE▶▶/REV◀◀
Slow/Reverse Slow Playback	SLOW
Recording/Recording Pause	REC▶/REC❚❚
Video Insert/Insert Pause	VID INS▶/VID INS❚❚
Audio Insert/Insert Pause	AUD INS▶/AUD INS❚❚
AV Insert/Insert Pause	A/V INS▶/ A/V INS❚❚
Audio Dubbing/Dubbing Pause	A.DUB▶/A.DUB❚❚

❺ **External Input Indicator**

❻ **Tape speed Indicator**

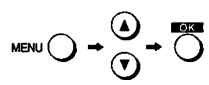
❼ **Index/Photoshot Index Search Indicator**

Notes:

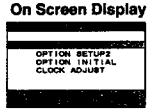
- When the item **"OSD MODE"** is set to **OFF**, the On Screen Display will not appear.
- When **"COLOR MODE"** is set to **OFF**, the On Screen Display will not appear.
- On Screen Display is not displayed when the SET UP or EDIT MENU screen is displayed.

Power Save Mode

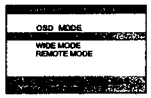
1 Press **MENU**, and then select **OPTION SETUP1**.



On Screen Display



2 Select **POWER SAVE MODE.**



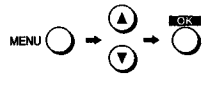
3 Select **OFF, 2H** or **6H.**

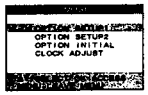
OFF: This setting does not conserve power when the VCR is off.
2H: The VCR turns off automatically if no operation is performed for approximately two hours.
6H: The VCR turns off automatically if no operation is performed for approximately six hours.

4 Press **MENU** twice to exit the On Screen Display.

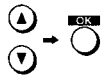
Wide Mode

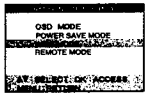
1 Press **MENU**, and then select **OPTION SETUP1**.



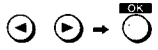


2 Select **WIDE MODE.**





3 Select **OFF** or **S1.**

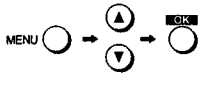


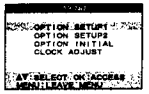
OFF: When the S-Video input socket on the monitor that is connected is an S-Video socket.
S1: When the S-Video input socket on the monitor that is connected is an S1-Video socket.
(If a wide mode video signal is sent to the monitor, the monitor screen size will automatically switch to wide mode.)

4 Press **MENU** twice to exit the On Screen Display.

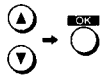
To Set the Remote mode

1 Press **MENU**, and then select **OPTION SETUP1**.

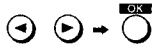


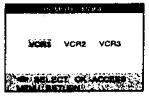


2 Select **REMOTE MODE.**



3 Select **VCR1, VCR2** or **VCR3.**



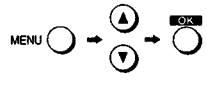


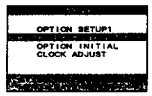
This allows the remote controller to be set for operating VCR1, VCR2 or VCR3.
- When changing the remote control mode, press **VCR1, VCR2** or **VCR3** while holding down **POWER**⏻ to change the remote control mode of the remote controller. If this is not done, it will not be possible to operate the VCR using the remote controller.

4 Press **MENU** twice to exit the On Screen Display.

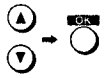
3D Y/C Mode

1 Press **MENU**, and then select **OPTION SETUP2.**

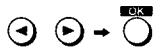




2 Select **3D Y/C MODE.**



3 Select **OFF** or **ON.**

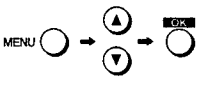


OFF: To reduce ghosting that occurs when playing back or recording a fast-moving video.
ON: To record with high quality.

4 Press **MENU** twice to exit the On Screen Display.

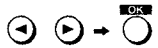
3D NR Mode

1 Press **MENU**, and then select **OPTION SETUP2.**



2 Select **3D NR MODE.**

3 Select **OFF, LEVEL1** or **LEVEL2.**

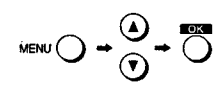


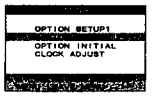
OFF: To use this VCR as the playback unit during editing.
LEVEL1: To get better picture quality during playback.
LEVEL2: When there is a lot of picture noise on the screen.

4 Press **MENU** twice to exit the On Screen Display.

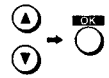
To Set the Color Mode

1 Press **MENU**, and then select **OPTION SETUP2.**

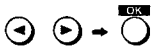




2 Select **COLOR MODE.**



3 Select **OFF** or **ON.**



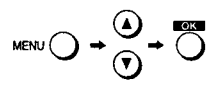
OFF: When performing recording and playback in black-and-white.
ON: When performing recording and playback in color.

4 Press **MENU** twice to exit the On Screen Display.

Initial Setting

If you want to return the VCR to the factory-preset condition, follow the procedure below.

1 Press **MENU**, and then select **OPTION INITIAL.**



- The message **"INITIAL COMPLETED."** appears at the bottom of the screen.

2 Press **MENU** to exit the On Screen Display.

Editing Functions

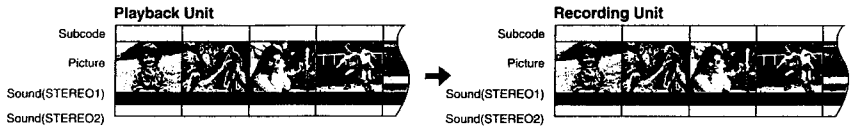
Using this VCR, 4 types of **One-Touch-Edit**, 3 types of **Manual Editing** and 3 types of **Program Editing** can be selected.
In Program Editing, after setting the edit start/end point, editing can be performed automatically. Edit programs can be set up to 10 scenes for each editing function (40 scenes for Assemble editing).

One-Touch-Edit
- Assemble Editing **(page 36)**
- Insert Editing (Video, Audio, AV) **(page 38)**
- Audio Dubbing **(page 38)**
- Audio Mixing **(page 40)**

Manual Editing
- Copying **(page 42)**
- Insert Editing (Video, Audio, AV) **(page 44)**
- Audio Dubbing **(page 46)**

Program Editing
- Assemble Editing **(page 48)**
- Insert Editing (Video, Audio, AV) **(page 52)**
- Audio Dubbing **(page 56)**

Copying
Allows the re-recording (copying) of the picture and sound from one tape onto another tape.

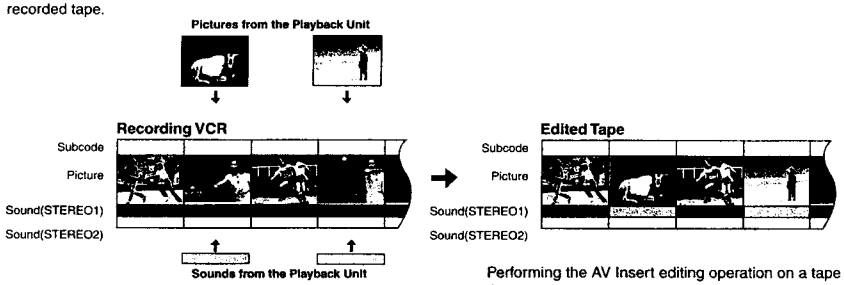


Performing the Copying operation on a tape that was recorded in 12bit audio mode.

Video Insert
Allows the partial replacement of the picture on a recorded tape. Sound is left in its original state.

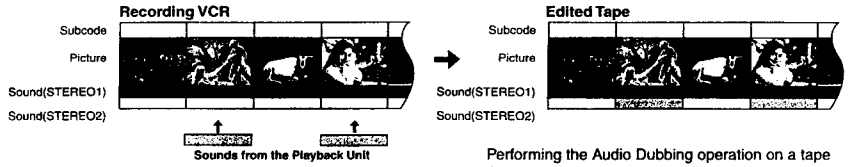
Audio Insert
Allows the partial replacement of sound on a recorded tape. Picture is left in its original state.

AV Insert
Allows the partial replacement of the picture and sound on a recorded tape.



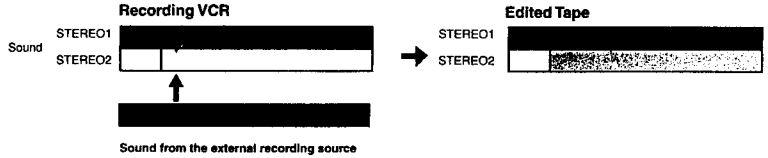
Performing the AV Insert editing operation on a tape that was recorded in 12bit audio mode.

Audio Dubbing
Allows the addition of the new sound on the STEREO2 track of a recorded tape. The original sound is left on the STEREO1 track.

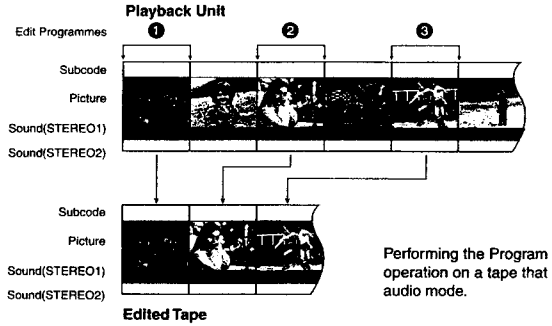


Performing the Audio Dubbing operation on a tape that was recorded in 12bit audio mode.

Audio Mixing
Allows the mixing of the the original sound on the STEREO1 track with the new sound from the external recording source and recording the mixed sound on the STEREO2 track of a recorded tape. The original sound is left on the STEREO1 track.



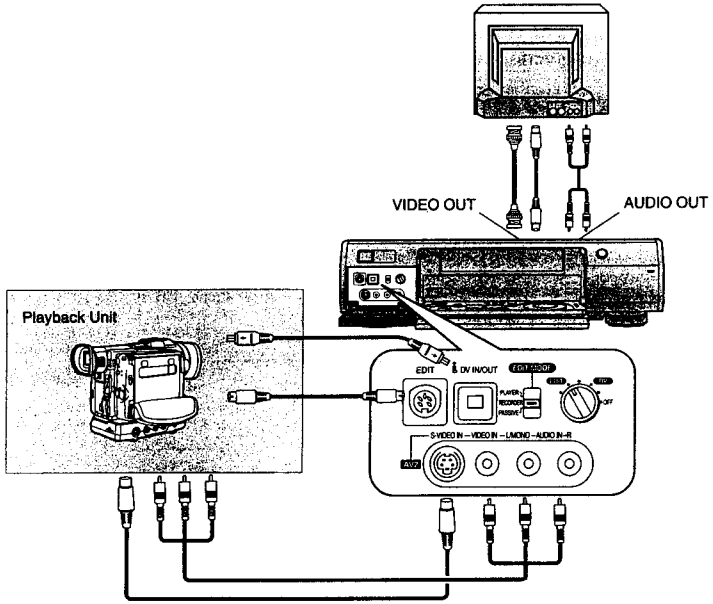
Assemble Editing
Allows the required scenes (picture and sound) to be picked up from a recorded tape and recorded in any desired order onto another tape.



Performing the Program Assemble editing operation on a tape that was recorded in 12bit audio mode.

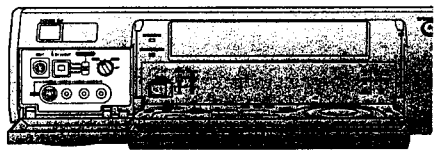
Connecting with a Digital Video Camera

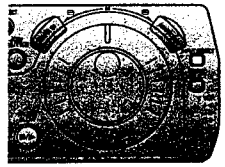
Example for connecting Panasonic Digital Video Camera as the playback unit, when controlling the playback unit through this unit.



Notes:

- Before connecting any cables, first make sure that the power for both units is off.
- Insert a recorded cassette into the playback unit, and a cassette with the closed record prevention tab into the VCR.
- If the playback unit is connected to the recording unit via an S-VIDEO cable, the video signal on the S-VIDEO cable takes priority. If the playback unit does not have an S-VIDEO socket do not connect the S-VIDEO cable to this unit.
- Use of an AC adaptor as the power source for the Digital Video Camera is recommended. Doing so avoids a situation where the camera shuts down due to low battery power.
- It is recommended that the DV cable be disconnected for editing with **INPUT SELECT** set to A1 and A2. If **INPUT SELECT** is set to A1 and A2 with the connections shown in the figure left unchanged, the monitor picture may be disturbed or noise may occur. (This has no effect on the actual editing operations.)
- When the units are connected using the DV cable and editing is performed, some editing functions will differ compared with when the units are connected using the AV cable. Refer to Glossary of Terms on page 66.
- Read the operating instructions of the Digital Video Camera.
- Do not change the **EDIT CONTROL** or **EDIT MODE** settings while performing setting or editing operations at the SET UP or EDIT MENU screens. Be sure to quit these screens before changing these settings.
- When using a Panasonic Digital Video Camera as the playback unit, the following editing functions can be used by connecting the camera to this unit with a DV cable:
  Copying
  Video Insert
  Audio Insert
  Assemble
  In this case, simply set **INPUT SELECT** to DV IN, and set **EDIT CONTROL** to DV.
  (This function may not operate properly with some models.)
- Use Time codes for Program Editing when the playback unit is connected to this unit via a DV cable.
- When using the BNC socket, use a BNC-PHONO conversion adapter (sold separately).





Playback Unit (Digital Video Camera)

1 Turn the power on.

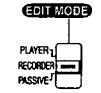
2 Make the Time code appear on the LCD monitor or the viewfinder.

3 Prepare the tape for playback.

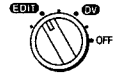
Recording Unit (this unit)

1 Turn the power on.

2 Set **EDIT MODE** to **RECORDER.**



3 Set **EDIT CONTROL** to **EDIT.**



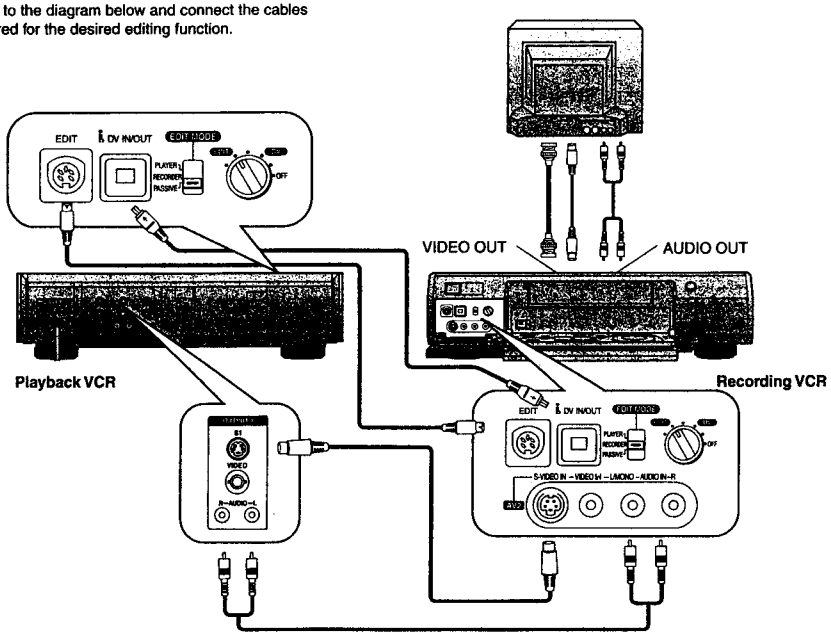
4 Press **INPUT SELECT** so that DV IN is selected.

- When performing Audio Dubbing or AV Insert, select A1 or A2.

Connecting Two Digital Video Cassette Recorders (Using two AG-DV2000)

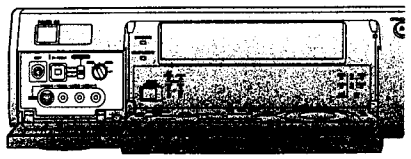
Example for connecting this unit, when controlling the playback VCR through the recording VCR.

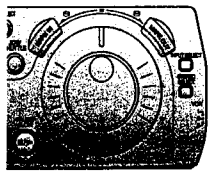
Refer to the diagram below and connect the cables required for the desired editing function.



Notes:

- Before connecting any cables, first make sure that the power for both VCRs is off.
- Insert a recorded cassette into the playback VCR, and a cassette with the closed record prevention tab into the VCR.
- When the units are connected using the DV cable and editing is performed, some editing functions will differ compared with when the units are connected using the AV cable. Refer to Glossary of Terms on page 66.
- Use Time codes for program editing when the playback VCR is connected to this unit via only a DV cable.
- It is recommended that the DV cable be disconnected for editing with **INPUT SELECT** set to A1 and A2. If **INPUT SELECT** is set to A1 and A2 with the connections shown in the figure left unchanged, the monitor picture may be disturbed or noise may occur. (This has no effect on the actual editing operations.)
- Do not change the **EDIT CONTROL** or **EDIT MODE** settings while performing setting or editing operations at the SET UP or EDIT MENU screens. Be sure to quit these screens before changing these settings.
- When the connections and setting are made as shown above, then :
  - The ▷**(PLAY)**, ▶▶**(FF)**, **REC** and the other such buttons on the playback VCR or the remote controller cannot be used to control the playback VCR directly. In order to permit direct control, set **EDIT CONTROL** on the playback VCR to **OFF.**
- The following editing functions can be used by connecting the playback VCR with a DV cable:
  Copying
  Video Insert
  Audio Insert
  Assemble
  In this case, simply set **INPUT SELECT** to DV IN, and set **EDIT CONTROL** to DV.
- When using the BNC socket, use a BNC-PHONO conversion adapter (sold separately).



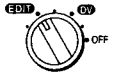


Playback VCR

1 Turn the power on.

2 Set **EDIT MODE** to **PASSIVE.**

3 Set **EDIT CONTROL** to **EDIT.**

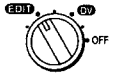


Recording VCR

1 Turn the power on.

2 Set the **EDIT MODE** to **RECORDER.**

3 Set **EDIT CONTROL** to **EDIT.**



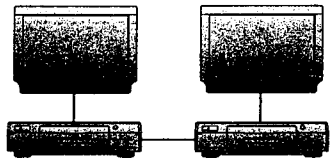
4 Press **INPUT SELECT** so that DV IN is selected.

- When performing Audio Dubbing or AV Insert, select A1 or A2.

Controlling the Recording VCR through the Playback VCR

Follow the procedure described below:

- Connect the edit cable to the **EDIT** socket on both the playback VCR and the recording VCR.
- Use AV cables to connect the input sockets on the recording VCR with the output sockets on the playback VCR.
- Connect two monitors, one to each of the VCRs, so that the screens from both VCRs can both be seen.
- Set **EDIT CONTROL** on both the playback VCR and the recording VCR to **EDIT.**
- Press **INPUT SELECT** on the playback VCR and select a position to which a cable is not connected.
- Set **EDIT MODE** on both VCRs as follows:
  Playback VCR : **PLAYER**
  Recording VCR : **PASSIVE**



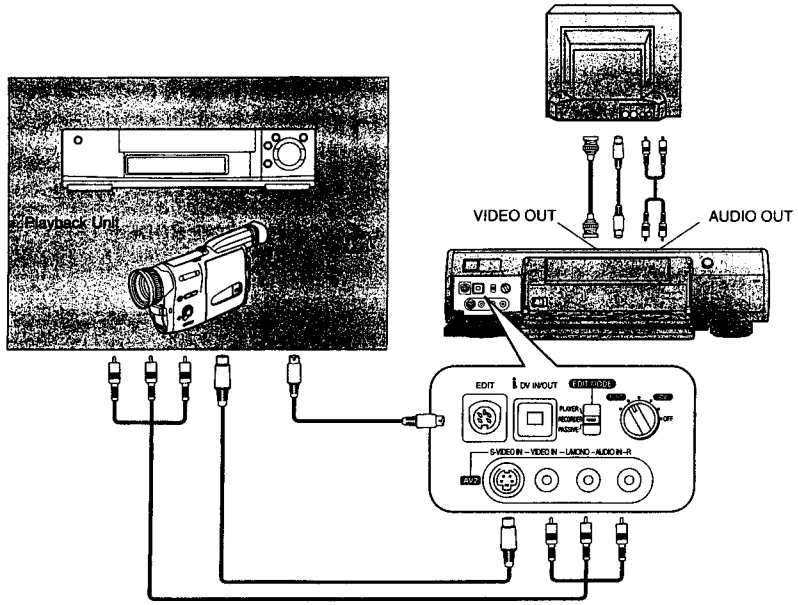
Notes:

- When this connection is made, the recording VCR cannot be controlled using the DV cable.
- Although noise may appear on the screen, depending on the connections, the noise has no effect on the actual editing operations.
- Audio Insert and AV Insert are not possible in this configuration.
- When performing editing with this connection, the editing accuracy may be worse than when controlled from the recording VCR.

Connecting an S-VHS (VHS) Video Equipment with an Edit Socket

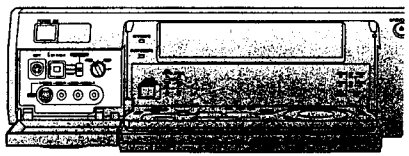
Example for connecting an S-VHS (VHS) Video Equipment with an Edit socket as the playback unit, when controlling the playback unit through the recording VCR (this unit).

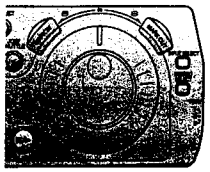
Refer to the diagram below and connect the cables required for the desired editing function.



Notes:

- Before connecting any cables, first make sure that the power for both units is off.
- Insert a recorded cassette into the playback unit, and a cassette with the closed record prevention tab into the VCR.
- If the playback unit is connected to the recording unit via an S-VIDEO cable, the video signal on the S-VIDEO cable takes priority. If the playback unit does not have an S-VIDEO socket do not connect the S-VIDEO cable to this unit.
- Read the operating instructions of the playback unit.
- Do not change the **EDIT CONTROL** or **EDIT MODE** settings while performing setting or editing operations at the SET UP or EDIT MENU screens. Be sure to quit these screens before changing these settings.
- When using this VCR as the recording VCR, the On Screen Display (date/time, Time Code) may scroll vertically when still playback or slow playback are performed by the playback VCR.
- When using the BNC socket, use a BNC-PHONO conversion adapter (sold separately).





Playback Unit (S-VHS (VHS) Video Equipment with an Edit socket)

1 Turn the power on.

2 Set the unit so that it is ready to be controlled.

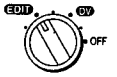
- Read the operating instructions of the playback unit and make the necessary settings.

Recording VCR (this unit)

1 Turn the power on.

2 Set **EDIT MODE** to **RECORDER.**

3 Set **EDIT CONTROL** to **EDIT.**



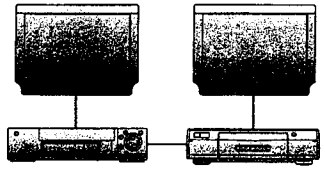
4 Press **INPUT SELECT** so that A2 is selected.

- If the playback unit is connected to the external input on the rear of this unit, select A1.

Connecting this unit as the Playback VCR to an S-VHS (VHS) VCR

Follow the procedure described below.

- Connect the edit cable to the **EDIT** socket on both the playback VCR and the recording VCR.
- Use AV cables to connect the output sockets on this unit with the input sockets on the S-VHS (VHS) VCR.
- Connect two monitors, one to this VCR and one to the S-VHS (VHS) VCR, so that the screens from both VCRs can both be seen.
- Set **EDIT CONTROL** on this unit to **EDIT.**
- Set **EDIT MODE** on this unit to **PLAYER.**
- Press **INPUT SELECT** on this unit and select a position to which a cable is not connected.
- Make the necessary editing control settings for the S-VHS (VHS) VCR. (Read the operating instructions of S-VHS (VHS) VCR.)

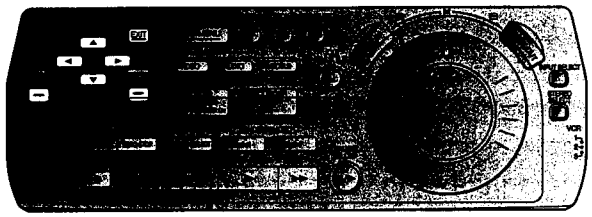


The Recording Unit — The Playback Unit (this unit)

Note:
Audio Insert and AV Insert are not possible in this configuration.

Initial Settings for Editing

This VCR also allows some settings for editing to be made at the On Screen Display (OSD).



Preparations

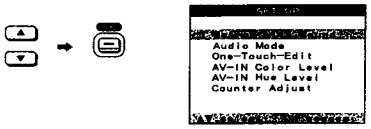
- Confirm that the monitor is on and the VCR viewing channel is selected.
- Complete necessary connections and settings. See pages 24-29.

Search with Sound

1 Press **SET UP.**

2 Select **Search With Sound.**

On Screen Display



3 Select **OFF, EDIT ONLY** or **ALWAYS ON.**

OFF: The sound cannot be heard during special playback.
EDIT ONLY: The sound can be heard during special playback only when an editing operation is in progress.
ALWAYS ON: The sound can be always heard during special playback.

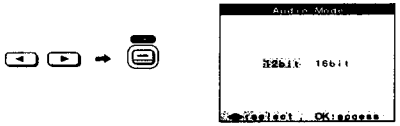
4 Press **EXIT** to exit the On Screen Display.

Audio Mode

1 Press **SET UP.**

2 Select **Audio Mode.**

3 Select **12bit** or **16bit.**



12bit: Divides the audio area into two stereo audio tracks, STEREO1 and STEREO2.
- If a recording is made in 12bit audio mode, the sound is recorded on STEREO1 only, and is not recorded on STEREO2. STEREO2 is used to record new audio that is added through Audio Dubbing or Audio Mixing.

16bit: Uses the entire audio area in order to record audio with greater quality.

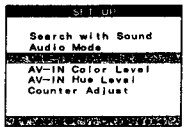
4 Press **EXIT** to exit the On Screen Display.

One-Touch-Edit

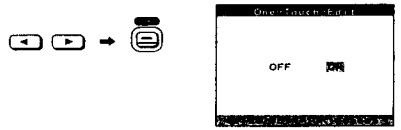
1 Press **SET UP.**

2 Select **One-Touch-Edit.**

On Screen Display



3 Select **OFF** or **ON.**



OFF: Select this whenever you are performing any editing function other than One-Touch-Edit.
ON: Select this in order to perform One-Touch-Edit.

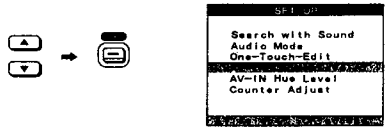
- One-Touch-Edit is possible only when **EDIT CONTROL** is set to either **DV** or **EDIT,** and **EDIT MODE** is set to **RECORDER.**

4 Press **EXIT** to exit the On Screen Display.

AV-IN Color Level

1 Press **SET UP.**

2 Select **AV-IN Color Level.**

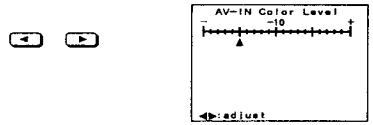


3 Select **SOURCE** or **ADJUST.**

SOURCE: Normally set this position.
ADJUST: To adjust the color level of the input external recording source connected to A1 or A2.

If you select **ADJUST** and then press **OK,** the AV-IN Color Level screen is displayed.

4 Adjust the color level using ◀▶.



Press ◀ to make the color lighter
Press ▶ to make the color darker
The setting can be adjusted over a range of ±20.

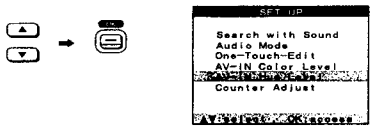
5 Press **SET UP,** and then press **EXIT** to exit the On Screen Display.

Notes:
- If **INPUT SELECT** is set to DV IN, the Audio Mode, AV-IN Color Level, and AV-IN Hue Level cannot be selected on SET UP screen.
- The AV-IN Color Level and AV-IN Hue Level can be selected in following cases:
  INPUT SELECT is set to A1 or A2;
  When the VCR is in stop mode

AV-IN Hue Level

1 Press **SET UP.**

2 Select **AV-IN Hue Level.**

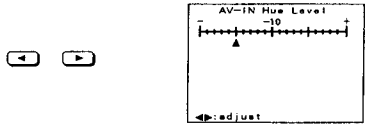


3 Select **SOURCE** or **ADJUST.**

SOURCE: Normally set this position.
ADJUST: To adjust the hue level of the input external recording source connected to A1 or A2.

If you select **ADJUST** and then press **OK**, the AV-IN Hue Level screen is displayed.

4 Adjust the hue level using ◀▶.



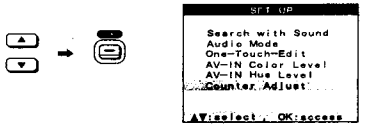
Press ◀ to make the hue redder.
Press ▶ to make the hue greener.
The setting can be adjusted over a range of ±20.

5 Press **SET UP**, and then press **EXIT** to exit the On Screen Display.

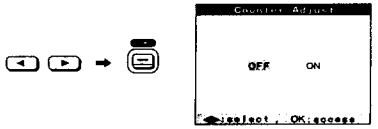
Counter Adjustment

1 Press **SET UP.**

2 Select **Counter Adjust.**



3 Select **ON** or **OFF.**



ON: When the counter mode of the connected unit is set to "DV Time code".
OFF: When a non-digital video equipment is connected. Also use this setting if a digital video equipment is connected but that VCR's counter mode is set to tape counter display.

4 Press **EXIT** to exit the On Screen Display.

Notes:
- If **INPUT SELECT** is set to DV IN, the Audio Mode, AV-IN Color Level, and AV-IN Hue Level cannot be selected on SET UP screen.
- The AV-IN Color Level and AV-IN Hue Level can be selected in following cases:
  INPUT SELECT is set to A1 or A2;
  When the VCR is in stop mode
- The Counter Adjustment function operates automatically if a digital video equipment is connected but that tape counter is displayed.

Creating the Tapes For Editing

In order to operate editing functions correctly, use these tapes for editing as follows:

- **Tape on which the picture and sound have been recorded properly for about 20 seconds prior to the edit start point:** [Playback unit] [Recording unit]
  This VCR first rewinds the tape to the section prior to the edit start point and then commences editing. For this reason, accurate editing cannot be performed if the tape has been left blank or if the picture and sound have not been recorded properly for 20 seconds prior to the edit start point.
- **Tape on which the Time code has been recorded continuously:** [Playback unit] [Recording unit]
  If the recording is broken up or if the tape is blank in places, the Time code will lack continuity, and editing will be aborted.
- **Tape which was recorded in SP mode:** [Recording unit]
  (This applies to Insert, Audio Dubbing and Audio Mixing only.)
  The above types of editing operations cannot be performed on a tape which was recorded in the LP mode.
- **Tape which was recorded in the 12bit audio mode:** [Recording unit]
  (This applies to AV Insert, Audio Dubbing and Audio Mixing editing only.)
  The above types of editing operations cannot be performed on a tape which was recorded in the 16bit audio mode.

When a tape which was recorded on another video recorder is used for Insert, Audio Dubbing or Audio Mixing editing operations, the sound may deteriorate and the picture may be disturbed.

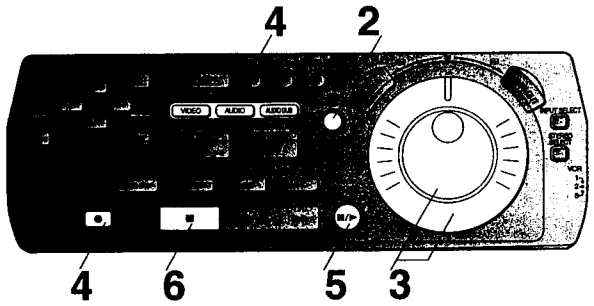
If tapes answering to the above description are not available, proceed with dubbing by following the steps below to create the tapes for editing.

1 Load the original cassette tape into the playback unit and the new cassette tape into the recording VCR (this VCR).
2 Connect the playback unit and recording VCR (this VCR).
  For the connection, use the DV cable when the contents of the original cassette are to be copied using their original digital signals, and use the AV cable when the contents are to be copied using the signals from the video and audio sockets.
  (To dub a 16bit audio tape and make a 12bit audio tape, connect the units using the AV cables, and proceed with the dubbing.)
3 Check that **EDIT CONTROL** is at the **OFF** position.
4 Set the VCR's tape speed to **SP.**
5 Record a blank picture for about 20 seconds.
  Set the playback unit to the stop mode, set **INPUT SELECT** on the recording VCR (this VCR) to A2 and start recording.
6 Switch over the input of the recording VCR (this VCR).
  If the DV cable was used for the connection in step **2**, switch over to "DV IN"; if the AV cable was used, switch over to A1or A2.
7 Press the play button on the playback unit to start playing the original tape.
8 Press **REC** on the recording VCR (this VCR) to start dubbing.

Notes:
- Digital copying using a DV cable yields a picture quality which undergoes hardly any deterioration at all.
- If a digital video tape is dubbed without connecting the DV cable, the original sub code data (Photoshot index signals, date information, etc.) will not be copied.
- The Time code is simultaneously recorded over the sub code of the tape when the tape is recorded. Also recorded in the sub code are the photoshot index signals, information on the recording date, etc.
  For further details on the Time code, see page 66.

Editing when Not Using an Edit Cable

To connect a VCR or Movie Camera without an Edit Socket and use this unit as the Recording VCR.



Preparations

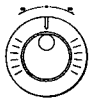
- Complete necessary connections and settings. See pages 24-33.
- Connect the INPUT1 or AV2 on this unit to the playback unit.
  Set **INPUT SELECT** on this VCR.
  A1: Through the INPUT1 sockets.
  A2: Through the AV2 sockets.
- If the playback unit has a DV terminal, connect to the DV IN/OUT on this unit with a DV cable.

Operations

1 Using the controls on the playback unit, search for the edit start point, and then pause the playback.

2 Press **JOG/SHUTTLE** on this unit, and check that the button is lit.

3 Search for the edit start point.

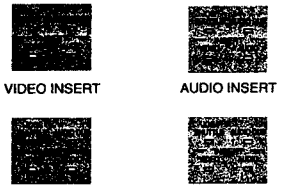


4 Press the button for the editing mode on this unit.

To copy the contents of the tape in the playback unit as is: Press **REC.**
To insert picture: Press **VIDEO INSERT.**
To insert sound: Press **AUDIO INSERT.**
To insert picture and sound: Press **VIDEO INSERT** and then press **AUDIO INSERT** (or vice versa).
To add new sound: Press **AUDIO DUB.**
For Audio Mixing: Press **AUDIO DUB** and then press **MIXING EDIT** on the front right panel.

- The Audio Mixing procedure differs in part from other editing operations. See page 40.
- The indicator that corresponds to the selected editing mode lights on the VCR display.

Indicators On the VCR Display



5 Press **PAUSE/SLOW** on this unit and start playback on the playback unit simultaneously.

- Editing begins.

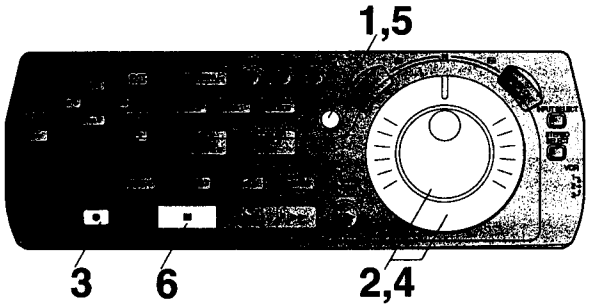
6 Press **■(STOP)** on this unit, and then press STOP on playback unit to stop editing.

Notes:

- Although Copying can be performed in LP mode, Insert and Audio Dubbing cannot be performed with a tape recorded in LP mode. It is necessary to first copy the tape in SP mode.
- **Video Insert and Audio Insert are not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
- **AV Insert , Audio Dubbing and Audio Mixing are not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.
- If the time display on this unit is set to tape counter mode during editing, this unit stops the editing operation automatically when the counter reaches "0:00.00". (This function does not work when using the Copying or Audio Dubbing functions.)

One-Touch Assemble

If the One-Touch Edit function is used, Assemble editing can be performed by controlling the playback unit through this unit.



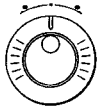
Preparations

- Complete necessary connections and settings. See pages 24-33.
- Set **One-Touch-Edit** to**ON** on SET UP menu.

Operations

1 Press **JOG/SHUTTLE** on this unit, and check that the button is lit.

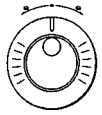
2 Search for the edit start point on this unit.



3 Press **REC.**

- The picture from the playback unit appears on the screen.

4 Search for the edit start point on the playback unit using Jog dial and Shuttle Ring on this unit.



5 Press **JOG/SHUTTLE** on this unit.

- Editing begins.
- To continue editing, press **JOG/SHUTTLE** on this VCR, and repeat steps **4-5.**

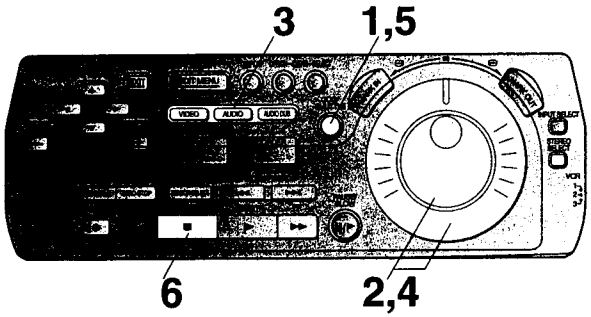
6 Press **■(STOP)** on this unit to stop editing.

Notes:

- Although Assemble editing can be performed in LP mode, Insert, Audio Dubbing, and Audio Mixing cannot be performed with a tape recorded in LP mode. It is necessary to first copy the tape in SP mode.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- When using the editing controller for remote control:
  In order to conserve battery power, **JOG/SHUTTLE** turns off after one minute.
  If **JOG/SHUTTLE** turns off after the edit start point has been set on the recording unit (step **2**), it is necessary to press **JOG/SHUTTLE** again (so that it is lit) before searching for the edit start point on the playback unit.
  If **JOG/SHUTTLE** turns off after the edit start point has been determined on the playback unit (step **4**), it is necessary to press **JOG/SHUTTLE** twice in order to start editing.

One-Touch Insert/Audio Dubbing

If the One-Touch Edit function is used, Insert (Video Insert, Audio Insert, and AV Insert) and Audio Dubbing can be performed by controlling the playback unit through this unit.



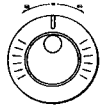
Preparations

- Complete necessary connections and settings. See pages 24-33.
- Set to **One-Touch-Edit ON** on SET UP menu.

Operations

1 Press **JOG/SHUTTLE** on this unit, and check that the button is lit.

2 Search for the edit start point on this unit.



3 Press the button for the editing mode on this unit.

To insert picture: Press **VIDEO INSERT.**
To insert sound: Press **AUDIO INSERT.**
To insert picture and sound: Press **VIDEO INSERT** and then press **AUDIO INSERT** (or vice versa).
To add new sound: Press **AUDIO DUB.**

- The indicator that corresponds to the selected editing mode lights on the VCR display.
- The picture from the playback unit appears on the screen.

Indicators On the VCR Display

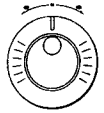

VIDEO INSERT


AUDIO INSERT


AV INSERT


AUDIO DUBBING

4 Search for the edit start point on the playback unit using Jog dial and Shuttle Ring on this unit.



5 Press **JOG/SHUTTLE** on this unit.

- Editing begins.
- To continue editing, press **JOG/SHUTTLE** on this VCR, and repeat steps **4-5.**

6 Press **■(STOP)** on this unit to stop editing.

To monitor the edited audio after Audio Dubbing

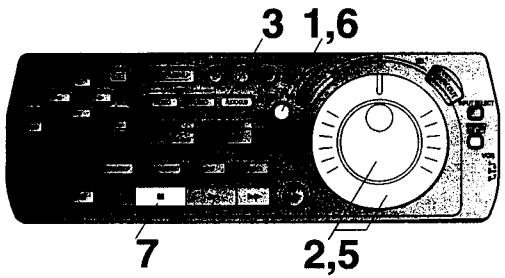
Press **STEREO SELECT** during playback and select STEREO2.

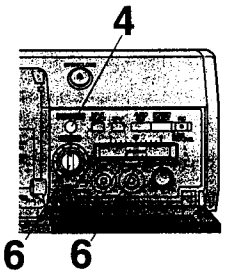
Notes:

- **Video Insert and Audio Insert are not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
- **AV Insert and Audio Dubbing are not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.
- If the time display on this unit is set to tape counter mode during editing, this unit stops the editing operation automatically when the counter reaches "0:00.00".
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- When using the editing controller for remote control:
  In order to conserve battery power, **JOG/SHUTTLE** turns off after one minute.
  If **JOG/SHUTTLE** turns off after the edit start point has been set on the recording unit (step **2**), it is necessary to press **JOG/SHUTTLE** again (so that it is lit) before searching for the edit start point on the playback unit.
  If **JOG/SHUTTLE** turns off after the edit start point has been determined on the playback unit (step **4**), it is necessary to press **JOG/SHUTTLE** twice in order to start editing.

One-Touch Audio Mixing

This function is used to mix the audio on STEREO1, which has already been recorded, with audio from a external recording source (A1 or A2), and record the result on STEREO2.
This function is useful for adding new audio, such as music or a narration, to the original audio which has already been recorded.





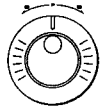
Preparations

- Complete necessary connections and settings. See pages 24-33.
- Set to **One-Touch-Edit ON** on SET UP menu.

Operations

1 Press **JOG/SHUTTLE** on this unit, and check that the button is lit.

2 Search for the edit start point on this unit.

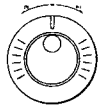


3 Press **AUDIO DUB** on this unit.

- The picture from the playback unit appears on the screen.

4 Press **MIXING EDIT** on this unit.

5 Search for the edit start point on the playback unit using Jog dial and Shuttle Ring on this unit.



6 Press **JOG/SHUTTLE** on this unit.

- Editing begins.
- If you wish to adjust the volume of the original audio (STEREO1) and external recording source (A1 or A2) during Audio Mixing,
  AUDIO MIX: To adjust the volume of the original audio (STEREO1).
  AUDIO REC LEVEL: To adjust the volume of the audio from external recording source (A1 or A2).
- To continue editing, press **JOG/SHUTTLE** on this VCR, and repeat steps **5-6**.

7 Press ■ **(STOP)** on this unit to stop editing.

To monitor the mixed signal after Audio Mixing

Press **STEREO SELECT** during playback and select STEREO2.

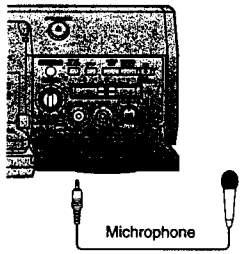
Notes:

- **Audio Mixing is not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.

When editing with a microphone

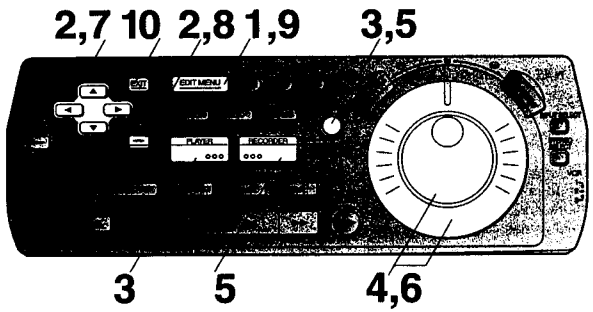
1. Connect the microphone to the MIC socket.
2. Press **JOG/SHUTTLE**.
3. Use Jog Dial and Shuttle Ring to search the recording start point.
4. Press **AUDIO DUB.**
5. Press **MIXING EDIT.**
6. Use **AUDIO REC LEVEL** slider to adjust the microphone level.
7. Press **PAUSE/SLOW.**
8. Press ■**(STOP)** to stop editing.

- The audio from the microphone is recorded as monaural audio. Use audio cables to connect audio equipment, etc., in order to record in stereo.
- If both the MIC socket and the line inputs are connected, the audio from the MIC socket is given priority in recording.



Manual Copying

This function can be used to copy tapes between digital video equipments with practically no deterioration in quality.
This function can also copy a tape that was recorded in S-VHS (VHS) format onto a digital video tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Operations

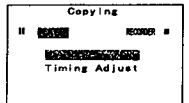
1 Press **EDIT MENU.**

2 Check that **Copying** is selected and press **OK.**

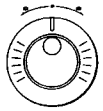
On Screen Display

3 Press **PLAYER,** and then press **JOG/SHUTTLE.**

- The picture from the playback unit appears on the screen.



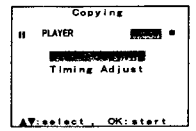
4 Search for the edit start point on the playback unit.



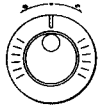
5 Press **RECORDER,** and then press **JOG/SHUTTLE.**

- The picture from the recording VCR appears on the screen.

On Screen Display



6 Search for the edit start point on the recording VCR.

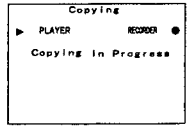


7 Select **Start Copying.**

8 Press **OK.**

- Editing begins.

9 Press **EDIT MENU** to stop editing.



- Operation now returns to the screen which appears in step **3.** This makes it possible to continue with editing or change the point at which editing is to start.

10 Press **EXIT.**

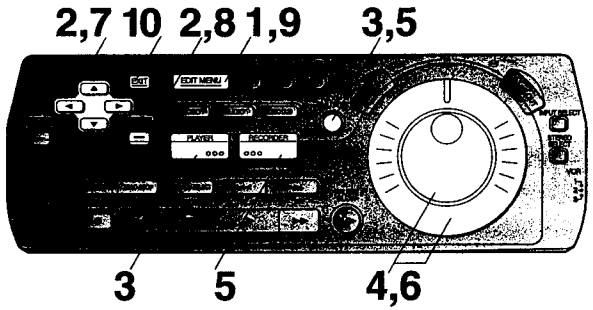
- The On Screen Display disappears.

Notes:

- If a digital video tape is copied without connecting a DV cable, the original sub code data (photoshot index signals, recording date, etc.) is not copied.
- Although Copying can be performed in LP mode, Insert and Audio Dubbing cannot be performed with a tape recorded in LP mode. It is necessary to first copy the tape in SP mode.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The pause operation may be indicated on the display of the playback unit even though the playback unit is actually playing the tape in slow motion.
- Up to ±1 second of slight deviation in the specified edit start position can be corrected. See page 64 for Edit Timing Adjustment.

Manual Insert

This function is used to replace the picture and sound on a recorded tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Example: Video Insert

Operations

1 Press **EDIT MENU.**

2 Select **Video Insert**, and then Press **OK.**
To insert picture: Select **Video Insert.**
To insert sound: Select **Audio Insert.**
To insert picture and sound: Select **AV Insert.**

On Screen Display

3 Press **PLAYER** and **JOG/SHUTTLE.**
- The picture from the playback unit appears on the screen.

Note:
Video Insert and Audio Insert are not possible in the following cases:
When the tape in the recording VCR (this unit) is:
Recorded in LP mode;
Blank, or contains a blank portion in the middle.

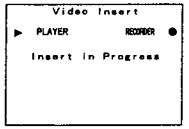
4 Search for the edit start point on the playback unit.

5 Press **RECORDER** and **JOG/SHUTTLE.**
- The picture from the recording VCR appears on the screen.

6 Search for the edit start point on the recording VCR.

7 Select **Start Insert.**

8 Press **OK.**
- Editing begins.



9 Press **EDIT MENU** to stop editing.

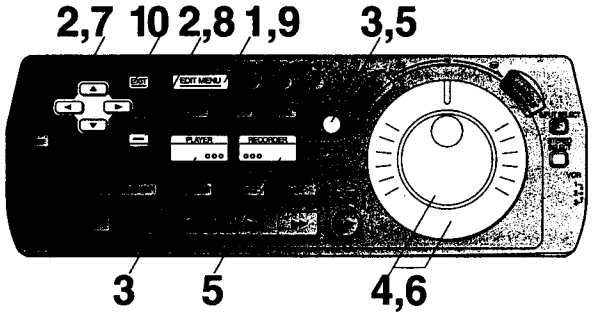
- Operation now returns to the screen which appears in step **3.** This makes it possible to continue with editing or change the point at which editing is to start.

10 Press **EXIT.**
- The On Screen Display disappears.

Notes:
- **AV Insert is not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The pause operation may be indicated on the display of the playback unit even though the playback unit is actually playing the tape in slow motion.
- Up to ±1 second of slight deviation in the specified edit start position can be corrected. See page 64 for Edit Timing Adjustment.

Manual Audio Dubbing

This function is used to add new sound on the STEREO2 track of previously recorded tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Operations

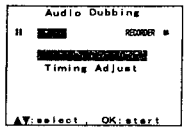
1 Press **EDIT MENU.**

2 Select **Audio Dubbing**, and then Press **OK.**

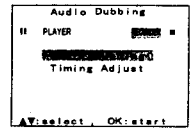
3 Press **PLAYER** and **JOG/SHUTTLE.**
- The picture from the playback unit appears on the screen.

4 Search for the edit start point on the playback unit.

On Screen Display



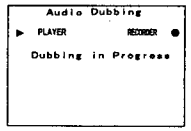
5 Press **RECORDER** and **JOG/SHUTTLE.**
- The picture from the recording VCR appears on the screen.



6 Search for the edit start point on the recording VCR.

7 Select **Start Dubbing.**

8 Press **OK.**
- Editing begins.



9 Press **EDIT MENU** to stop editing.

- Operation now returns to the screen which appears in step **3.** This makes it possible to continue with editing or change the point at which editing is to start.

10 Press **EXIT.**
- The On Screen Display disappears.

To monitor the edited audio after Audio Dubbing

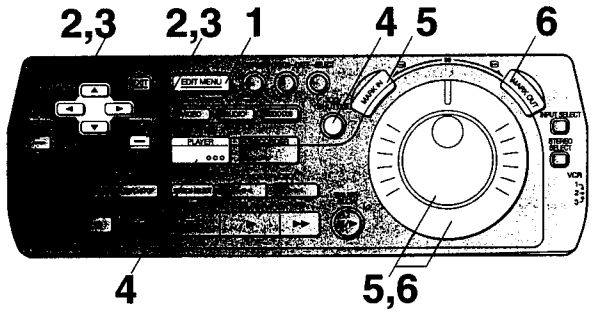
Press **STEREO SELECT** during playback and select STEREO2.

Notes:

- **Audio Dubbing is not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The pause operation may be indicated on the display of the playback unit even though the playback unit is actually playing the tape in slow motion.
- Up to ±1 second of slight deviation in the specified edit start position can be corrected. See page 64 for Edit Timing Adjustment.

Program Assemble

This function can be used to link together desired scenes on a tape.
This function can also be used to skip unnecessary scenes recorded on a tape and copy them onto a separate tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Operations

1 Press **EDIT MENU.**

2 Select **Program Editing**, and then Press **OK.**

3 Select **Assemble**, and then Press **OK.**

On Screen Display

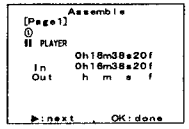
Notes:

- Program Editing can be performed using either the tape counter or Time code display, but the Time code display should be used if the units are connected only by a DV cable.
- If you attempt to switch to the tape counter display in order to perform editing after setting the editing points using the Time code display, the Erase all programs screen is displayed. (The Erase all programs screen is also displayed when you change from the tape counter display to the Time code display.)
- After setting a program, if you attempt to set another program in a different editing operation, the set contents for the previous editing operation remain on the setting screen. In order to prevent editing errors, perform the Erase all programs operation (page 61) whenever you set a program under a different editing mode.
- Program editing can not be performed with a movie camera that has a 4-digit counter.

4 Press **PLAYER** and **JOG/SHUTTLE.**

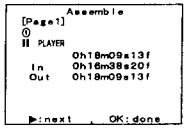
- The picture from the playback unit appears on the screen.

5 Search for the edit start point on the playback unit and press **MARK IN.**



6 Search for the edit end point on the playback unit and press **MARK OUT.**

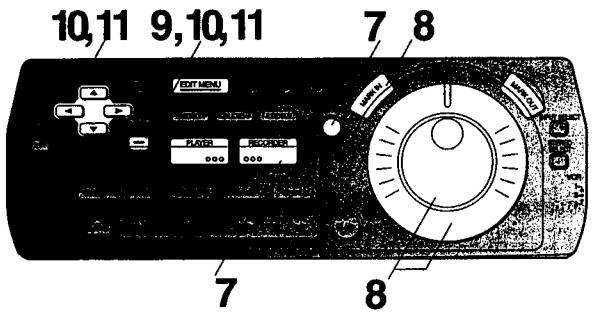
(Continued on next page)



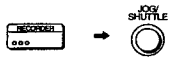
Notes:

- Although Assemble editing can be performed in LP mode, Insert, Audio Dubbing, and Audio Mixing cannot be performed with a tape recorded in LP mode. It is necessary to first copy the tape in SP mode.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The editing operation may not be performed correctly if the set duration of a program is less than 4 seconds.
- On video equipment whose Time code display or tape counter display does not show the frame value, the area where the frame value is displayed appears as "00f" or it remains blank.
  With some units, the frame value may be displayed when **MARK IN** or **MARK OUT** is pressed in steps 5 and 6 even if the unit concerned does not show the frame value.

Program Assemble (continued)

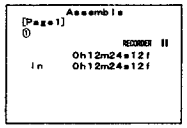


7 Press **RECORDER** and **JOG/SHUTTLE.**
- The picture from the recording VCR appears on the screen.



8 Search for the edit start point on the recording VCR and press **MARK IN.**

On Screen Display

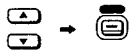


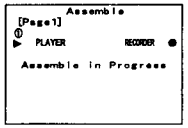
9 Press **OK.**
- **"OK: done"** is not displayed at the bottom of the screen.

To check and change programs:
Select **Confirm/Change** and then press **OK.**
- To confirm, change, insert or erase editing programs, see pages 60-61.
- Programs cannot be inserted or erased through the recording unit.

To continue setting programs:
1 Press **EDIT MENU.**
2 Press **PLAYER.**
3 Using ◄ ►, select the program number.
The program number changes each time these buttons are pressed.
(Up to 40 programs can be set. 10 programs can be set on one page; if this number is exceeded, the display automatically changes to the next page.)
4 Repeat steps **4-6** and **9.**

10 Select **Start Assemble** to start editing, and then press **OK.**
- Editing begins after the playback unit and the recording VCR both rewind their tapes to the edit start points.





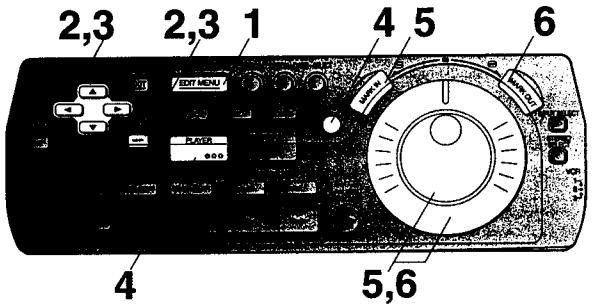
11 After completing editing, select **Review,** and then press **OK.**
- The edited pictures are played back.

To interrupt editing or Review:
Press **EDIT MENU.**

Notes:
- The Preview function cannot be used with the Assemble function.
- Up to ±1 second of slight deviation in the specified edit start/end position can be corrected. See pages 62-63 for Edit Timing Adjustment.

Program Insert

This function is used to replace the picture and sound on a recorded tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Example: Video Insert

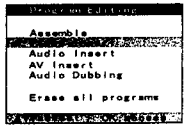
Operations

1 Press **EDIT MENU.**

2 Select **Program Editing**, and then Press **OK.**

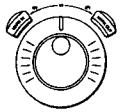
On Screen Display

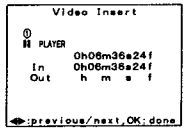
3 Select the desired editing operation, and then press **OK.**
To insert picture: **Video Insert.**
To insert sound: **Audio Insert.**
To insert picture and sound: **AV Insert.**



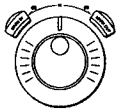
4 Press **PLAYER** and **JOG/SHUTTLE.**
- The picture from the playback unit appears on the screen.

5 Search for the edit start point on the playback unit and press **MARK IN.**

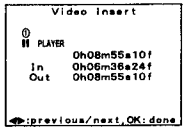




6 Search for the edit end point on the playback unit and press **MARK OUT.**



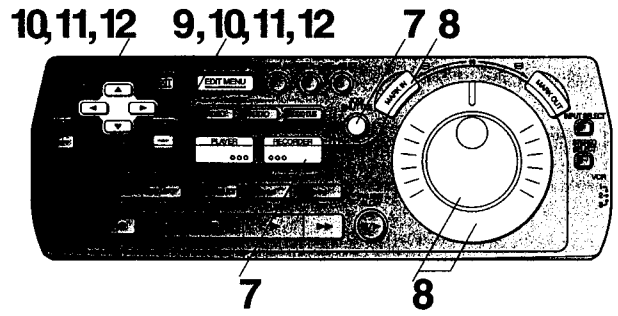
(Continued on next page)



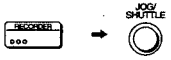
Notes:
- Program Editing can be performed using either the tape counter or Time code display.
- If you attempt to switch to the tape counter display in order to perform editing after setting the editing points using the Time code display, the Erase all programs screen is displayed. (The Erase all programs screen is also displayed when you change from the tape counter display to the Time code display.)
- After setting a program, if you attempt to set another program in a different editing mode, the set contents for the previous editing mode remain on the setting screen. In order to prevent editing errors, perform the Erase all programs operation (page 61) whenever you set a program under a different editing mode.
- Program Editing can not be performed with a movie camera that has a 4-digit counter.
- **Video Insert and Audio Insert are not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
- **AV Insert is not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle.
  When **INPUT SELECT** is set to DV IN.

Notes on editing point setting
- The Program Insert and Audio Dubbing functions require the setting of only three editing points: the in and out points on the playback unit and the in point on the recording unit, or the in point on the playback unit and the in and out points on the recording unit.
- If both in and out points are set on both the playback unit and the recording unit, and the times between the points do not match, editing stops at the first out point that is reached.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The editing operation may not be performed correctly if the set duration of a program is less than 4 seconds.
- On video equipment whose Time code display or tape counter display does not show the frame value, the area where the frame value is displayed appears as "00f" or it remains blank.
  With some units, the frame value may be displayed when **MARK IN** or **MARK OUT** is pressed in steps **5** and **6** even if the unit concerned does not show the frame value.

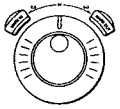
Program Insert (continued)



7 Press **RECORDER** and **JOG/SHUTTLE.**
- The picture from the recording VCR appears on the screen.



8 Search for the edit start point on the recording VCR and press **MARK IN.**

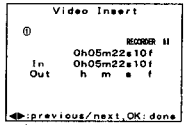


9 Press **OK.**

To check and change programs:
Select **Confirm/Change** and then press **OK.**
- To confirm, change, insert or erase editing programs, see pages 60-61.

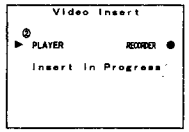
To continue setting programs:
1 Press **EDIT MENU.**
2 Press **PLAYER.**
3 Using ◀ ▶, select the program number.
The program number changes each time these buttons are pressed.
Up to 10 programs can be set.
4 Repeat steps **4-9.**

On Screen Display

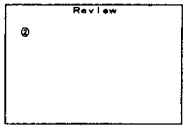


10 Select **Preview** to confirm the editing operation before performing actual editing, and then press **OK.**
- Preview begins after the playback unit and the recording VCR both rewind their tapes to the edit start points.

11 Select **Start Insert** to start editing, and then press **OK.**
- Editing begins after the playback unit and the recording VCR both rewind their tapes to the edit start points.



12 After completing editing, select **Review,** and then press **OK.**
- The edited pictures are played back.

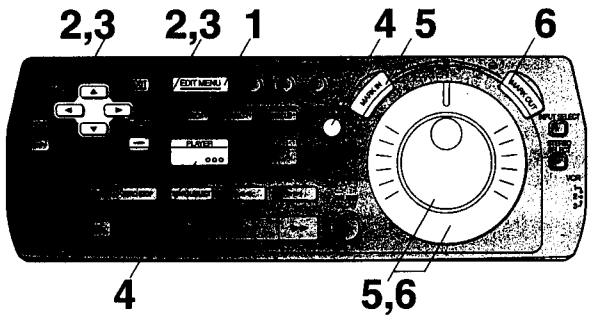


To interrupt editing, Preview or Review:
Press **EDIT MENU.**

Note:
Up to ±1 second of slight deviation in the specified edit start/end position can be corrected. See pages 62-63 for Edit Timing Adjustment.

Program Audio Dubbing

This function is used to add new sound on the STEREO2 track of previously recorded tape.



Preparations

- Complete necessary connections and settings.
  See pages 24-33.

Operations

1 Press **EDIT MENU.**

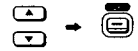
2 Select **Program Editing**, and then Press **OK.**

On Screen Display

Notes:

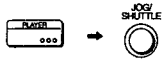
- Program Editing can be performed using either the tape counter or Time code display.
- If you attempt to switch to the tape counter display in order to perform editing after setting the editing points using the Time code display, the Erase all programs screen is displayed.
  (The Erase all programs screen is also displayed when you change from the tape counter display to the Time code display.)
- Program editing can not be performed with a movie camera that has a 4-digit counter.
- After setting a program, if you attempt to set another program in a different editing mode, the set contents for the previous editing mode remain on the setting screen. In order to prevent editing errors, perform the Erase all programs operation (page 61) whenever you set a program under a different editing mode.
- **Audio Dubbing is not possible in the following cases:**
  When the tape in the recording VCR (this unit) is:
  Recorded in 16bit audio mode;
  Recorded in LP mode;
  Blank, or contains a blank portion in the middle
  When **INPUT SELECT** is set to DV IN.

3 Select **Audio Dubbing,** and then press **OK.**

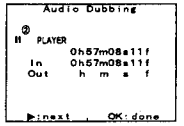


4 Press **PLAYER** and **JOG/SHUTTLE.**

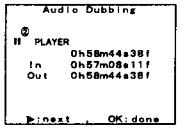
- The picture from the playback unit appears on the screen.



5 Search for the edit start point on the playback unit and press **MARK IN.**



6 Search for the edit end point on the playback unit and press **MARK OUT.**

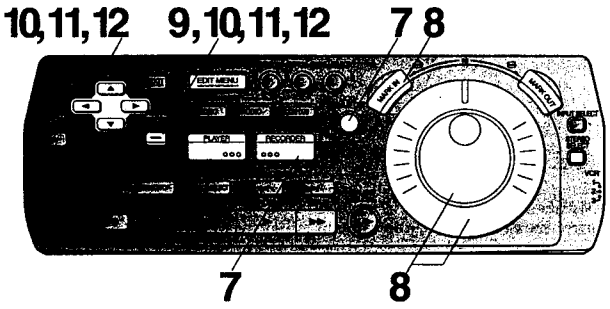


(Continued on next page)

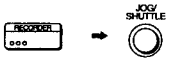
Notes on editing point setting

- The Program Insert and Audio Dubbing functions require the setting of only three editing points: the in and out points on the playback unit and the in point on the recording unit, or the in point on the playback unit and the in and out points on the recording unit.
- If both in and out points are set on both the playback unit and the recording unit, and the times between the points do not match, editing stops at the first out point that is reached.
- In order to ensure that the editing operation is performed properly, the editing points should be set at least 20 seconds after the beginning of the tape.
- The editing operation may not be performed correctly if the set duration of a program is less than 4 seconds.
- On video equipment whose Time code display or tape counter display does not show the frame value, the area where the frame value is displayed appears as "00f" or it remains blank.
  With some units, the frame value may be displayed when **MARK IN** or **MARK OUT** is pressed in steps **5** and **6** even if the unit concerned does not show the frame value.

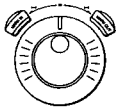
Program Audio Dubbing (continued)



7 Press **RECORDER** and **JOG/SHUTTLE.**
- The picture from the recording VCR appears on the screen.



8 Search for the edit start point on the recording VCR and press **MARK IN.**

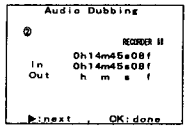


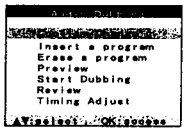
9 Press **OK.**

To check and change programs:
Select **Confirm/Change** and then press **OK.**
- To confirm, change, insert or erase editing programs, see pages 60-61.

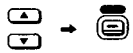
To continue setting programs:
1 Press **EDIT MENU.**
2 Press **PLAYER.**
3 Using ◄ ►, select the program number.
The program number changes each time these buttons are pressed.
Up to 10 programs can be set.
4 Repeat steps **4-9.**

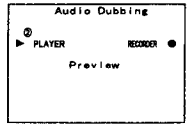
On Screen Display



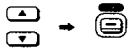


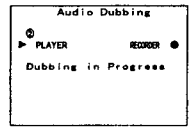
10 Select **Preview** to confirm the editing operation before performing actual editing, and then press **OK.**
- Preview begins after the playback unit and the recording VCR both rewind their tapes to the edit start points.



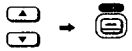


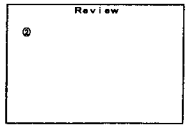
11 Select **Start Dubbing** to start editing, and then press **OK.**
- Editing begins after the playback unit and the recording VCR both rewind their tapes to the edit start points.





12 After completing editing, select **Review**, and then press **OK.**
- The edited sounds are played back.





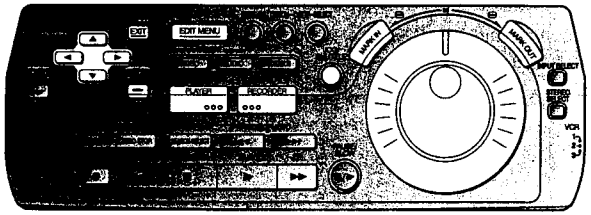
To interrupt editing, Preview or Review:
Press **EDIT MENU.**

To monitor the edited audio after Audio Dubbing
Press **STEREO SELECT** during playback and select STEREO2.

Note:
Up to ±1 second of slight deviation in the specified edit start/end position can be corrected. See pages 62-63 for Edit Timing Adjustment.

Other Editing Functions

These functions are used to confirm, change, etc. programs.

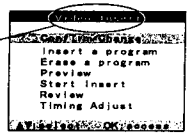


Once all program settings are completed, the screen shown at right is displayed.

Example: Video Insert

This portion varies, depending on the editing function that was programed.

On Screen Display



To check/change programs:

1 Select **Confirm/Change**, and then press **OK.**
- The program list for the playback unit is displayed.

To check the program list for the recording unit, press **RECORDER.**
To just confirm the program settings, press **EDIT MENU.** If corrections are needed, continue with the procedure described below.

2 Select the program number for which changes are to be made, and then press **OK.**
- The Program Change screen for the selected program number is displayed.

3 Press **JOG/SHUTTLE.**

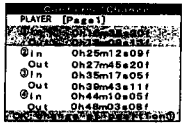
4 Use the Jog Dial/Shuttle Ring to search for the editing point that is to be corrected.

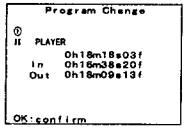
5 To change an edit start point, press **MARK IN.**
To change an edit end point, press **MARK OUT.**

6 Once all changes are completed, press **OK.**

7 Press **EDIT MENU.**

On Screen Display





To insert a new program between existing programs:

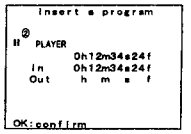
1 Select **Insert a program**, and then press **OK.**
- The program list is displayed.

2 Select the program number where a program is to be inserted, and then press **OK.**
- The Insert a program screen is displayed.

3 Refer to the pages that describe the Program Editing functions (on pages 48-59), and set the new program.

4 When setting is complete, press **OK.**

5 Press **EDIT MENU.**



To cancel a program:

1 Select **Erase a program,** and then press **OK.**
- The program list is displayed.

2 Select the program number to be erased, and then press **OK.**

3 Press **EDIT MENU.**

To cancel all editing programs:

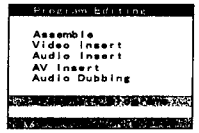
1 Press **EDIT MENU** twice.

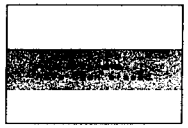
2 Select **Program Editing,** and then press **OK.**

3 Check that **Erase all programs** is selected and press **OK.**
- The Erase all programs screen is displayed.

4 Select **YES,** and then press **OK.**
- The screen returns to the Program Editing menu.
- After the message indicating that **"All programs have been erased."** appears on the screen, operation returns to the EDIT MENU screen.

5 Press **EDIT MENU.**



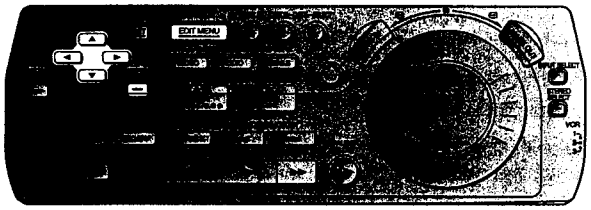


If the EDIT MENU screen is cancelled before the above procedure is performed, the method for displaying the Program Editing changes.
Press **EDIT MENU** so that the EDIT MENU screen is displayed. Use to select **Program Editing,** and then press **OK.**

Note:
Programs set in the recording unit for the Assemble editing function cannot be inserted or erased.

Edit Timing Adjustment

When perfoming editing in conjunction with a unit which has a different machanism, there may be a lag in the edit start point due to a deviation between the time a pause cancellation signal is received by the recording unit and the time recording actually begins.
Edit Timing Adjustment is used to compensate the edit start and end time in light of this start-up time deviation.



Program Editing

After setting edit start/end points, the actual editing operation may start slightly before or slightly after the position that was set, depending on the equipment that is connected. The procedure described below can adjust the edit timing in order to correct for errors of up to approximately ±1 second in the edit start points and edit end points on the playback unit.

Example: Video Insert

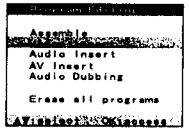
Operations

1 Press **EDIT MENU.**

2 Select **Program Editing**, and then Press **OK.**

3 Select desired editing operation, and then press **OK** twice.

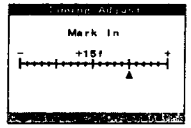
On Screen Display



4 Select **Timing Adjust**, and then press **OK.**

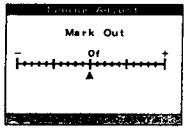
5 Adjust the timing for the edit start point by setting the amount of the discrepancy for the start-up time.
- The setting is displayed in frames (approoximately 1/30 of a second) units.

Press ▶ if the start point is too early; press ◀ if it is too late.
- Each time the button is pressed, the tape moves by 1 frame.
- Corrections can be made in the range of ± 30 frames.



6 Press **OK.**

7 Adjust the timing for the edit end pont in same way.

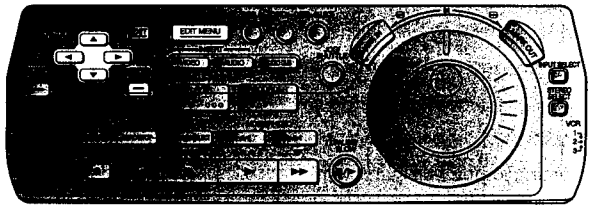


8 Press **OK.**

9 Select **Start Insert (Assemble or Dubbing)**, and then press **OK.**
- If the results of editing indicate that the adjustment is inadequate, repeat steps **4-8.**

Notes:
- The procedure described on these pages is to be performed after exiting the EDIT MENU screen. If this procedure is performed after having executed Start Editing or Review, start this procedure from step 4 on the Video Insert (Assemble, Audio Insert, AV Insert or Audio Dubbing) screen.
- The adjusted frame unit is applied to all of the programs that have been set at the moment when the adjustment is made.

Edit Timing Adjustment (continued)



Manual Editing

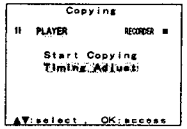
If there is a deviation in the results of a manual editing operation, the timing of the edit start (In) position on the playback unit can be adjusted by approximately ± 1 second. Perform the procedure described below when setting an edit start point in any editing mode.

Example: Manual Copying

Operations

On Screen Display

1 Select **Timing Adjust**, and then press **OK.**

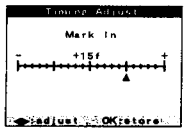


2 Adjust the timing for the edit start point by setting the amount of the discrepancy for the start-up time.

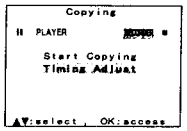
- The setting is displayed in frames (apporoximately 1/30 of a second) units.

Press ▶ if the start point is too early; press ◀ if it is too late.

- Each time the button is pressed, the tape moves by 1 frame.
- Corrections can be made in the range of ± 30 frames.

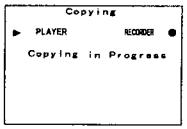


3 Press **OK.**



4 Select **Start Copying (Insert, Dubbing)**, and then press **OK.**

- If the results of editing indicate that the adjustment is inadequate, repeat steps 1-3.



On Screen Display Messages

Before requesting service, check the following points once again.
The error message is indicated in brackets [ ].

[Please insert video tape.]
☞ **REC, ▷ (PLAY), ▶▶ (FF), ◀◀ (REW)** or **JOG/SHUTTLE** is pressed when no cassette is in the VCR. Insert a video cassette.

[Recording not allowed. Check setting of the record-prevention tab.]
☞ **REC, VIDEO INSERT, AUDIO INSERT** or **AUDIO DUB** has been pressed when using a cassette with the opened record-prevention tab. Use a cassette with a closed record-prevention tab.

[This function cannot be made in the blank part of the tape.]
☞ Are you trying to edit using a blank tape, or a tape that contains a blank segment in the middle?
Editing is not possible in blank segments (because there are no Time codes). In order to use such a tape for editing, copy the tape once so that continuous Time codes are recorded on the tape, even if there is nothing else recorded on the tape. See page 33.

[This function is not allowed in LP-recorded section of the tape.]
☞ It is not possible to edit a tape that was recorded in LP mode, or that was recorded partly in SP mode and partly in LP mode. Make a copy of the tape in SP mode and then use that tape. See page 33.

[This function cannot be made with 16bit mode audio recording.]
☞ Does the audio mode change in the middle of the tape?
The Audio Dubbing and AV Insert functions can only be used on a tape that was recorded in 12bit audio mode. Make a copy of the tape in 12bit mode and then use that tape. See page 33.

[EDITING cannot be made. Please check switches setting and cables.]
☞ Are the necessary cables for controlling the playback unit (Edit cable or DV cable) connected?
Connect cables for controlling.
☞ Is the playback unit turned off?
☞ Are **EDIT MODE, EDIT CONTROL**, and the input select setting on this VCR set properly for the desired editing operation?
☞ Is there more than one digital video device (including personal computers) connected to this VCR?
☞ Are this VCR and another unit connected to this VCR both set to control each other (if the connected unit is a digital video device)?

[Audio Dubbing or Audio Mixing cannot be made with DV input mode.]
☞ Audio Dubbing and Audio Mixing functions will not work if **INPUT SELECT** is set to DV IN.
Set to A1 or A2.

[AV Insert cannot be made with DV input mode.]
☞ AV Insert will not work if **INPUT SELECT** is set to DV IN. Set to A1 or A2.

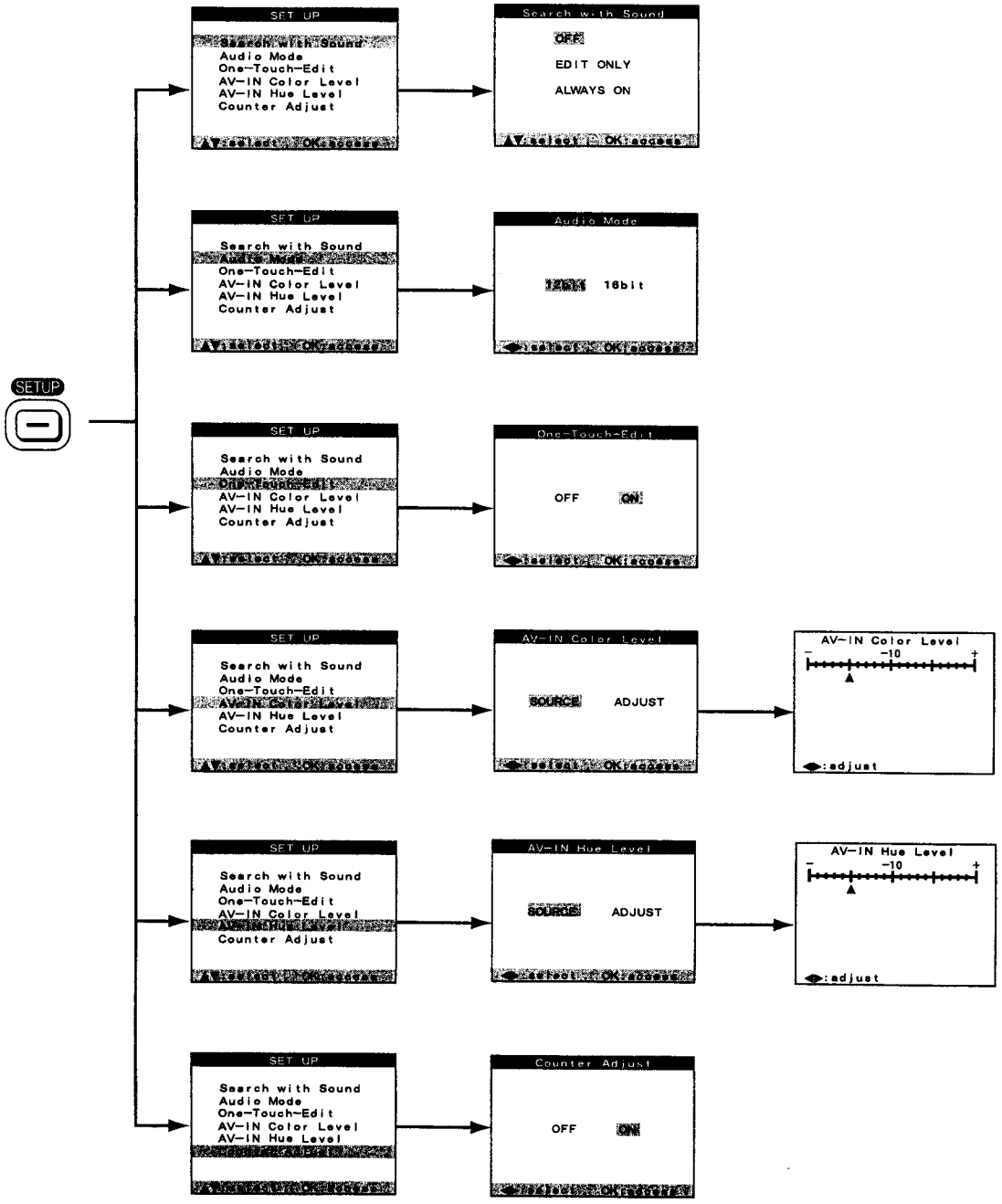
[Please select DV input mode.]
☞ Is **EDIT CONTROL** set to DV, but **INPUT SELECT** is set to something other than DV IN?

[This tape is an incorrect type. Please replace the tape.]
☞ A video cassette tape other than a DV or MINI DV cassette has been inserted.
DVCPRO cassettes cannot be used with this VCR.

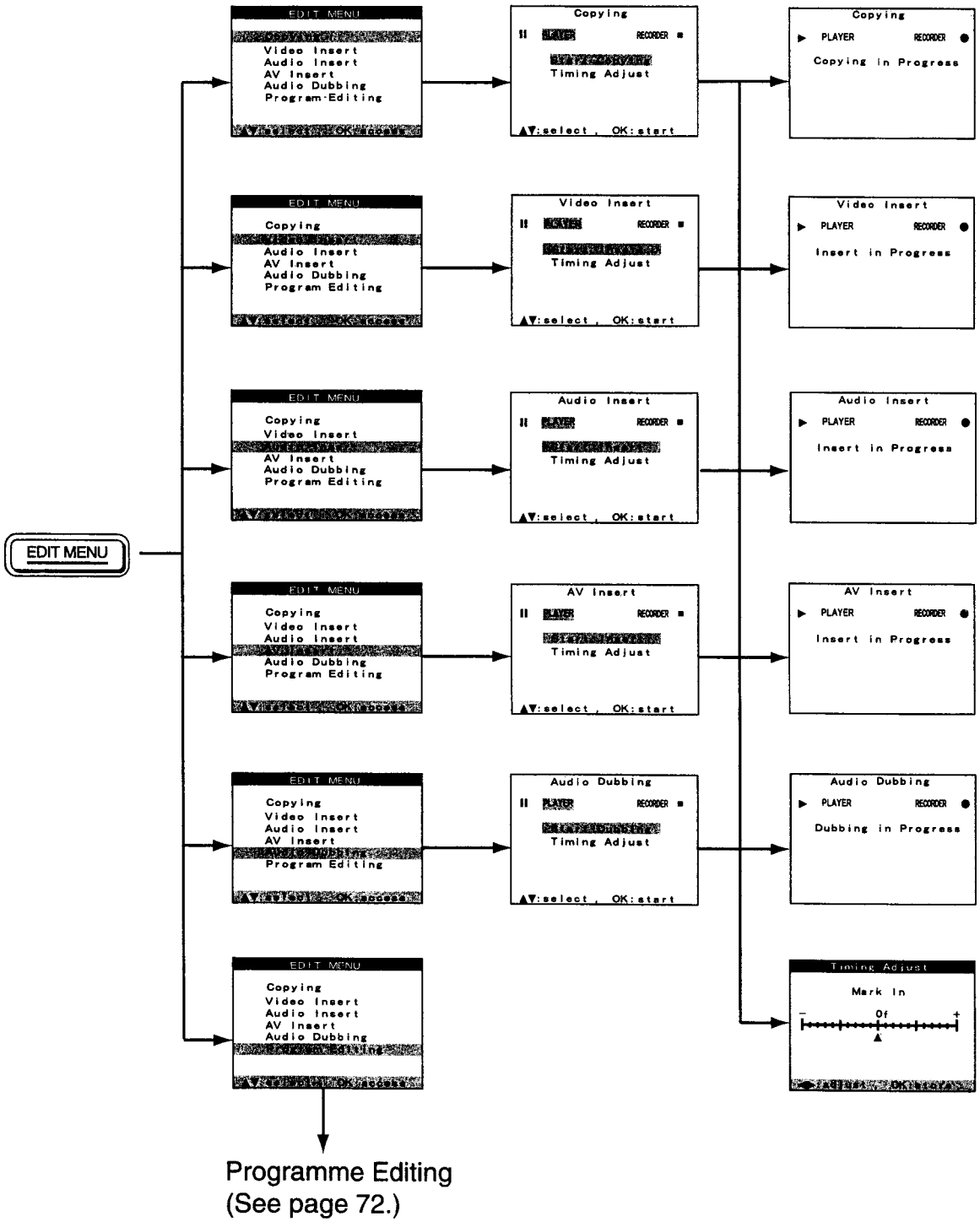
Other messages may also appear.
Follow the instructions in the message.

Flow Chart for On Screen Displays

SET UP On Screen Display



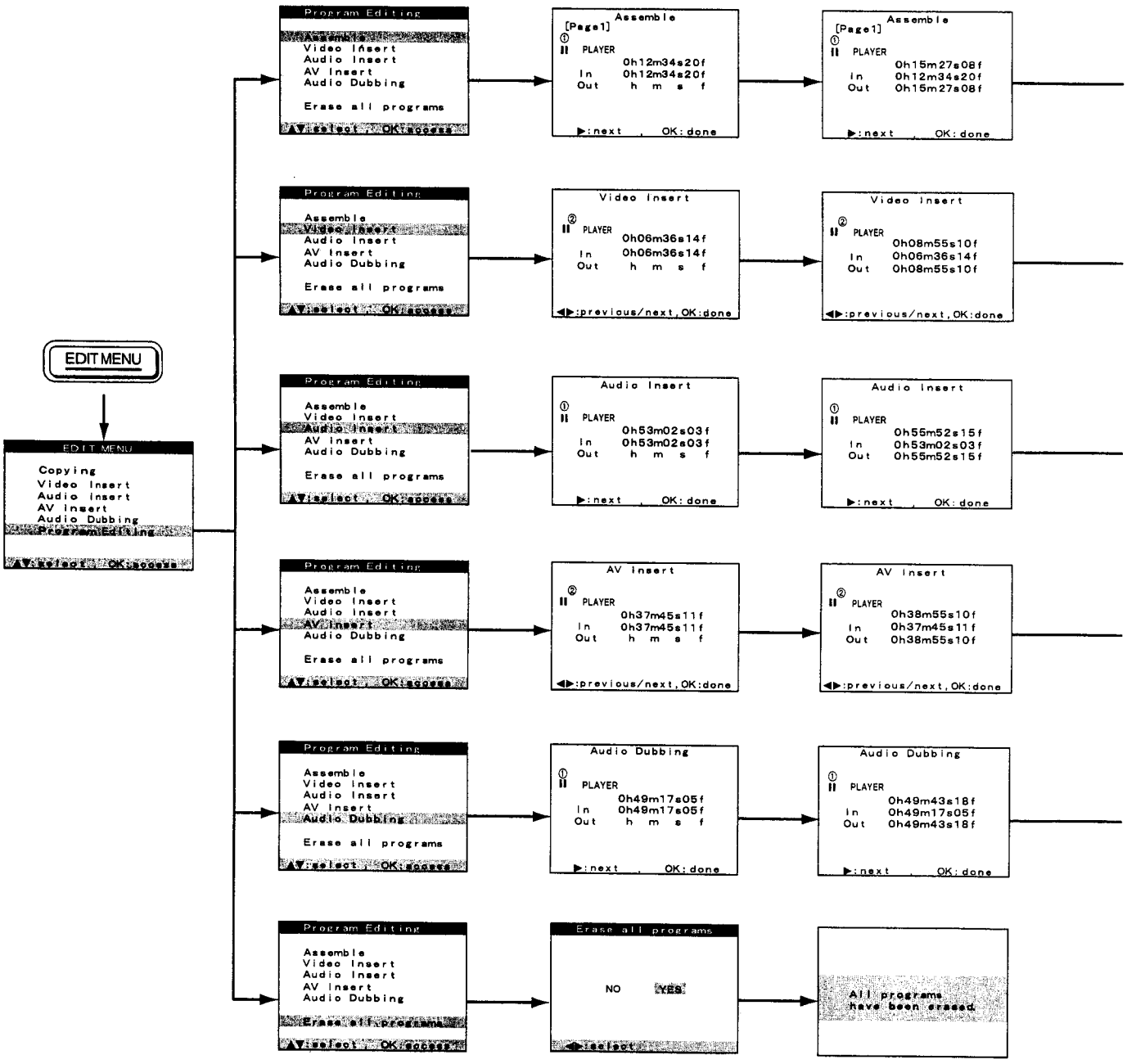
EDIT MENU On Screen Display (Manual Editing)

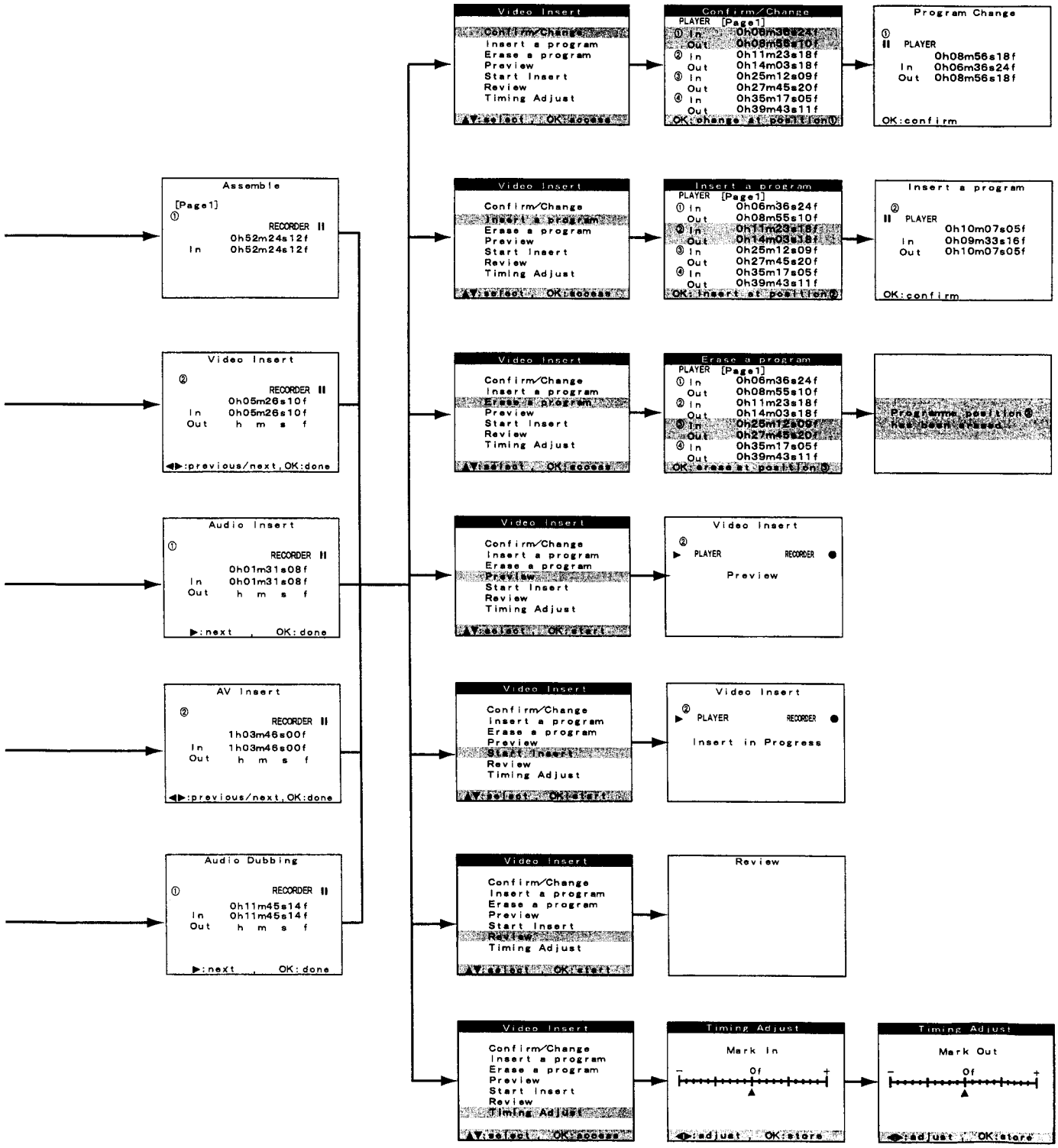


Programme Editing
(See page 72.)

Flow Chart for On Screen Displays (continued)

Program Editing On Screen Display




Assemble
[Page1]
①
RECORDER
0h52m24s12f
In 0h52m24s12f
Video Insert
②
RECORDER
0h05m26s10f
In 0h05m26s10f
Out h m s f
◀▶:previous/next,OK:done
Audio Insert
①
RECORDER
0h01m31s08f
In 0h01m31s08f
Out h m s f
▶:next , OK:done
AV Insert
②
RECORDER
1h03m46s00f
In 1h03m46s00f
Out h m s f
◀▶:previous/next,OK:done
Audio Dubbing
①
RECORDER
0h11m45s14f
In 0h11m45s14f
Out h m s f
▶:next , OK:done
Video Insert
Confirm/Change
Insert a program
Erase a program
Preview
Start Insert
Review
Timing Adjust
▲▼:select , OK:access
Confirm/Change
PLAYER [Page1]
① In 0h06m36s24f
Out 0h08m55s10f
② In 0h11m23s18f
Out 0h14m03s18f
③ In 0h25m12s09f
Out 0h27m45s20f
④ In 0h35m17s05f
Out 0h39m43s11f
OK:change at position①
Program Change
①
PLAYER
0h08m56s18f
In 0h06m36s24f
Out 0h08m56s18f
OK:confirm
Insert a program
PLAYER [Page1]
② In 0h11m23s18f
Out 0h14m03s18f
OK:insert at position②
Insert a program
②
PLAYER
0h10m07s05f
In 0h09m33s16f
Out 0h10m07s05f
OK:confirm
Erase a program
PLAYER [Page1]
③ In 0h25m12s09f
Out 0h27m45s20f
OK:erase at position③
Programme position③
has been erased.
Video Insert
②
▶ PLAYER RECORDER ●
Preview
Video Insert
②
▶ PLAYER RECORDER ●
Insert in Progress
Review
Timing Adjust
Mark In
Mark Out
◀▶:adjust , OK:store

SECTION 2

ADJUSTMENT PROCEDURES

CONTENTS

SECTION 2
ADJUSIMENT PROCEDURES

3.DISASSEMBLY/ASSEMBLYPROCEDURES

3-1. Disassembly/Assembly Procedures for cabinet parts, C.B.A. and Mechanism Unit

3-1-1. Disassemble Flow Chart for cabinet parts, C.B.A. and Mechanism Unit.

This flow chart indicates the disassembly steps the cabinet parts, C.B.A. and Mechanism Unit in order to access to items to be serviced. When reinstalling, perform the steps in reverse order.

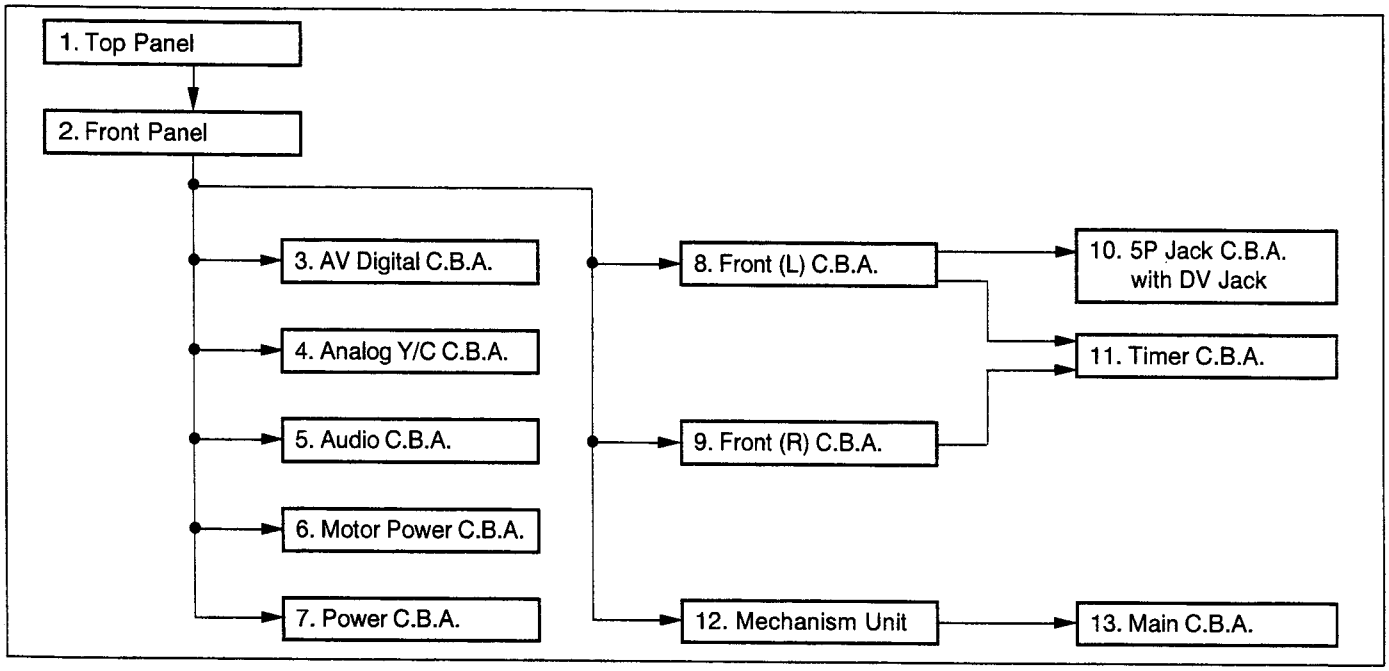


Fig. 1-1 Flow Chart

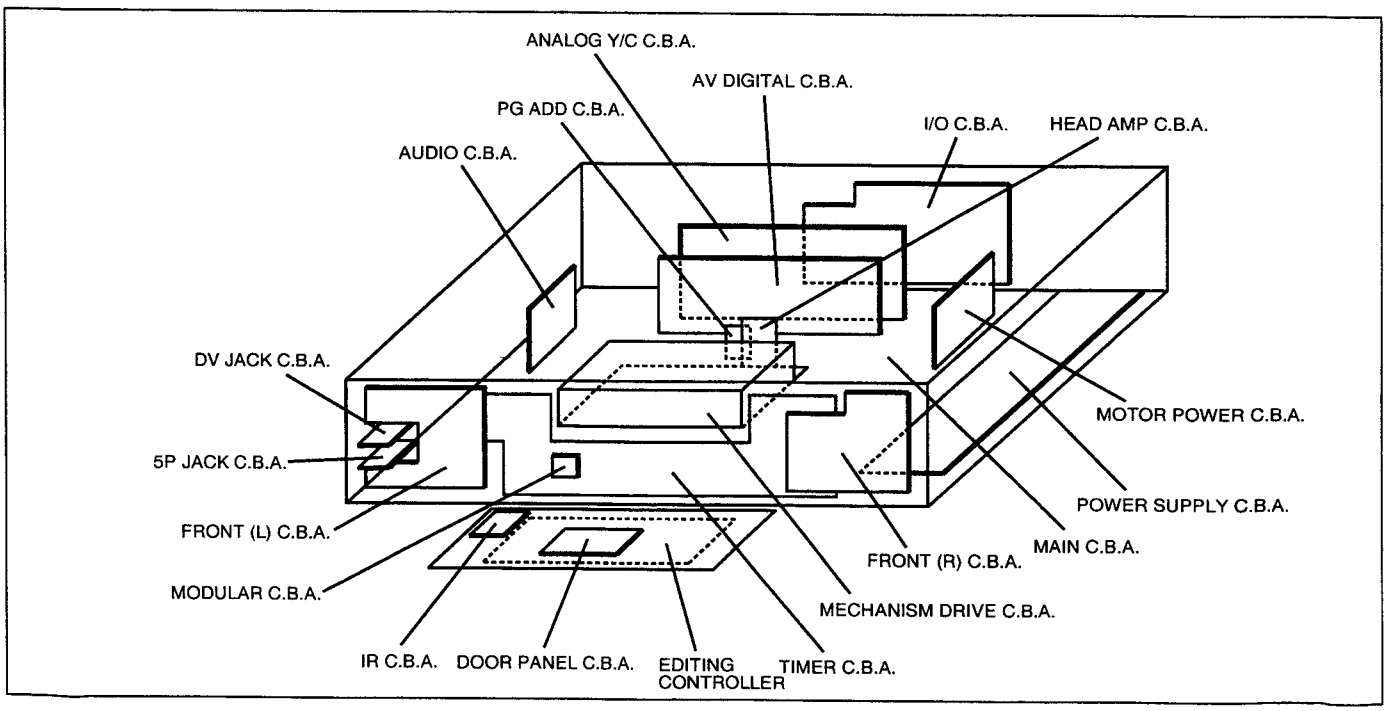


Fig. 1-2

3-1-2. Disassembly/Assembly Procedures (for cabinet parts, C.B.A. and Mechanism Unit)

No.	ITEM / PART	FIG.	REMOVAL (SCREW)
1	Top Panel	Fig. D-1	4-Screws (A) 1-Screw (B) Remove Side Plate (6 Hooks).
2	Front Panel	Fig. D-2 Fig. D-3	2-Screws (C) 1-Connector (P3701) 9-Locking Tabs (a) When Front Panel is installed, confirm the Connector P7504.
3	AV Digital C.B.A.	Fig. D-6 Fig. D-5	2-Screws (D) 2-Connectors (FP3201, P3701) **Note 1:** When the EVR Connection C.B.A. is installed, confirm the arrow direction on C.B.A..
4	Analog Y/C C.B.A.	Fig. D-6	2-Screws (E)
5		Fig. D-6	**Note 2:** 2-Locking Tabs (b)
6	Motor Power C.B.A.	Fig. D-6	1-Connector (P2502) **Note 2:** 2-Locking Tabs (c)
7	Power C.B.A.	Fig. D-6	1-Connector (P1290) 7-Locking Tabs (d)
8	Front (L) C.B.A.	Fig. D-3	1-Connector (PS4851) 2-Locking Tabs (e)
9	Front (R) C.B.A.	Fig. D-3	1-Connector (P4801) 2-Locking Tabs (f)
10	5P Jack C.B.A. & DV Jack C.B.A.	Fig. D-5	1-Screw (G) 2-Connectors (P3781, P7651) 1-Locking Tab (g)
11	Timer C.B.A.	Fig. D-4	3-Connectors (P7501, P7502, P7503) 6-Locking Tabs (h)
12	Mechanism Unit	Fig. D-5	Remove the Tray Angle. Set the Mechnism to the "Eject" position. 4-Connectors (P2705, FP5002, P6504, P6505) 3-Screws (H)
13	Main C.B.A.	Fig. D-6	4-Screws (D/E) 8-Locking Tabs (i)

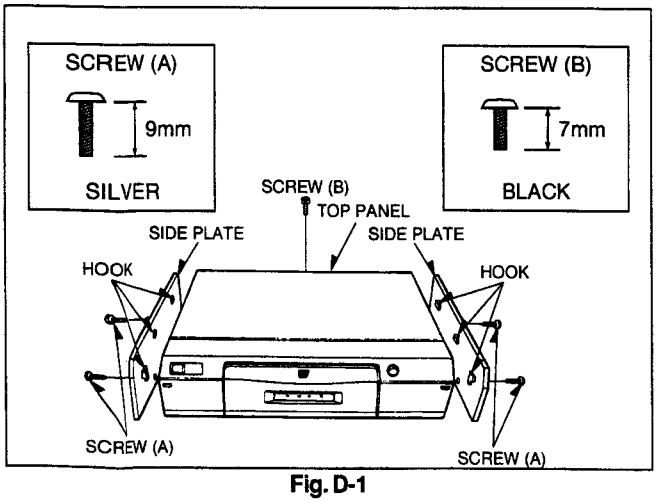


Fig. D-1

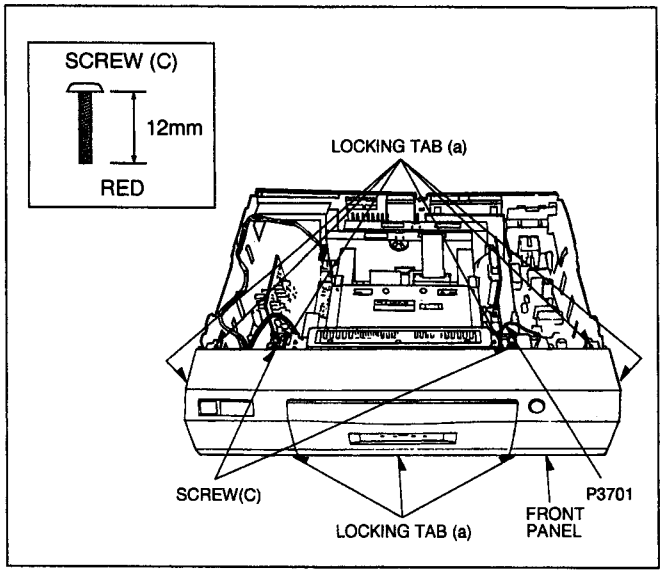


Fig. D-2

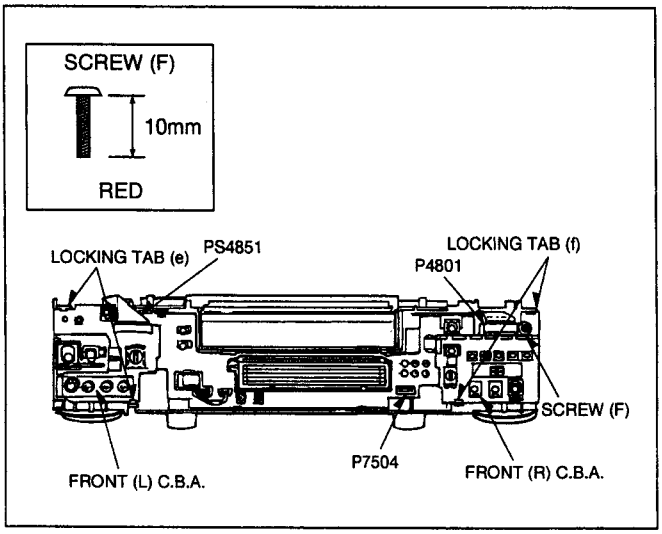


Fig. D-3

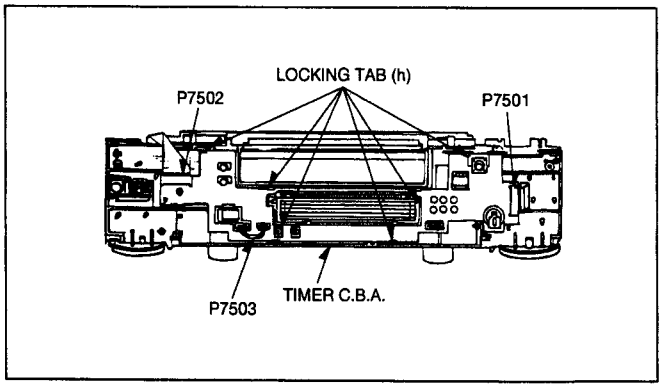


Fig. D-4

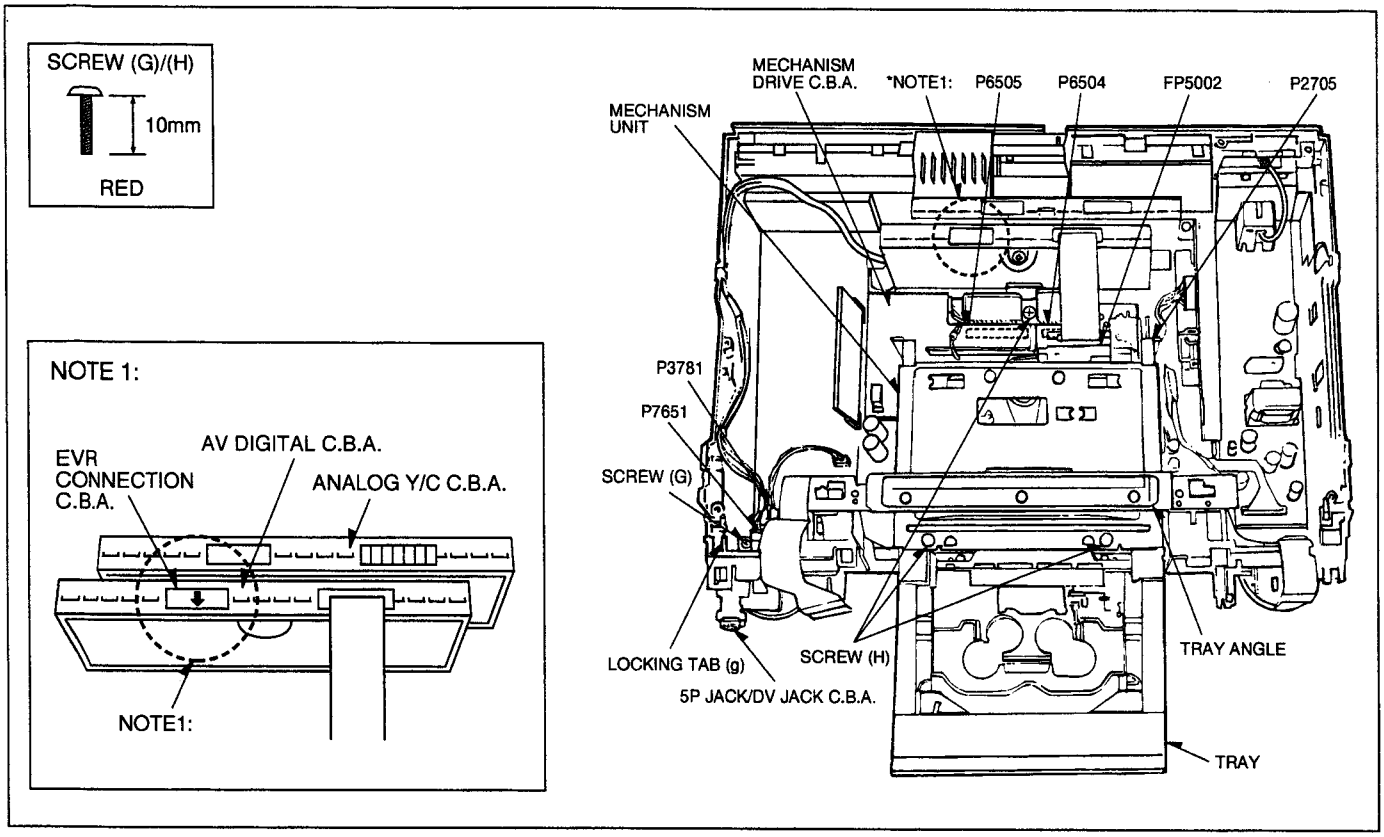

SCREW (G)/(H)
10mm
RED
NOTE 1:
EVR CONNECTION C.B.A.
AV DIGITAL C.B.A.
ANALOG Y/C C.B.A.
NOTE1:
MECHANISM DRIVE C.B.A.
*NOTE1:
P6505
P6504
FP5002
P2705
MECHANISM UNIT
P3781
P7651
SCREW (G)
LOCKING TAB (g)
SCREW (H)
5P JACK/DV JACK C.B.A.
TRAY ANGLE
TRAY

Fig. D-5

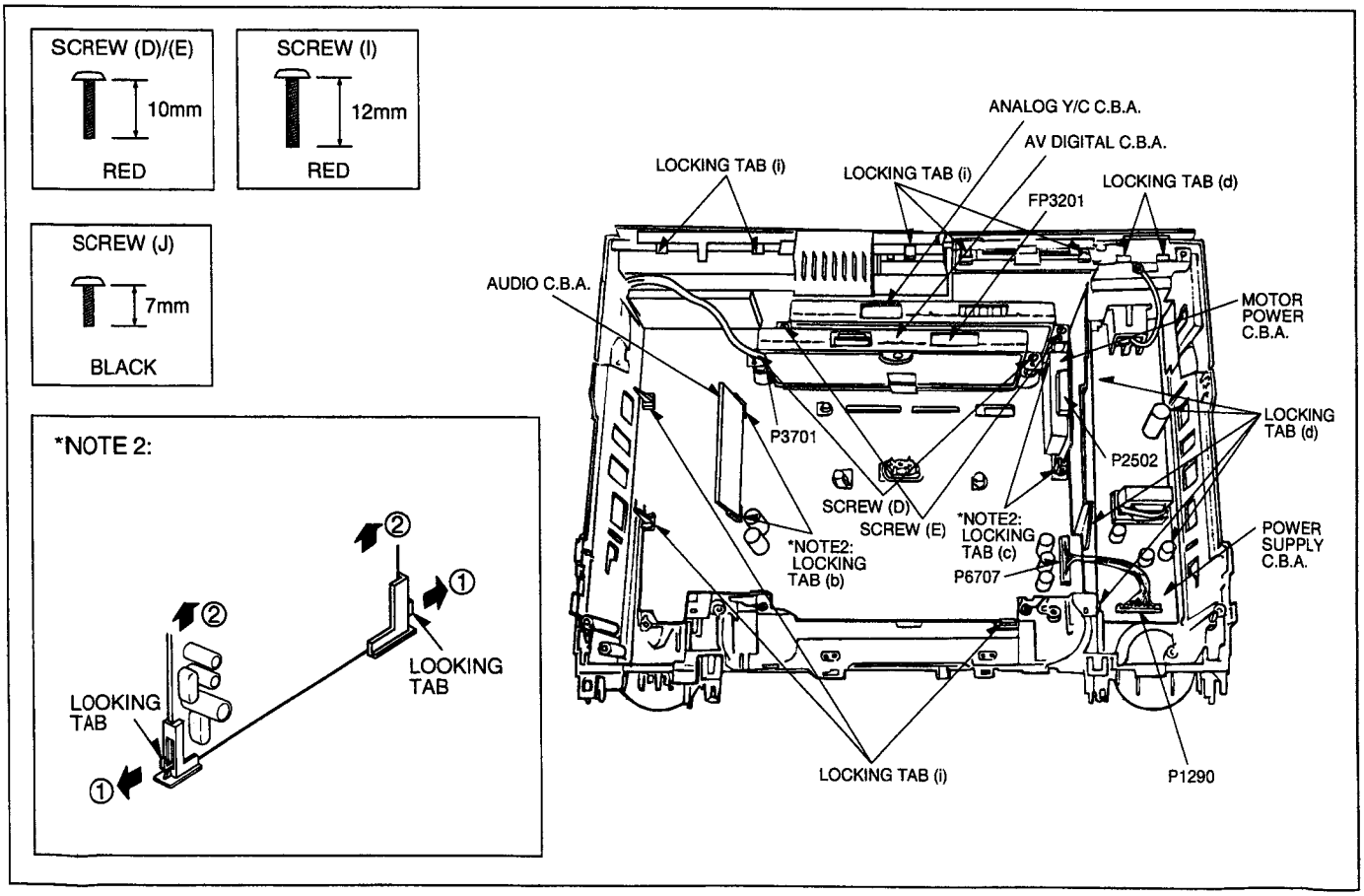

SCREW (D)/(E)
10mm
RED
SCREW (I)
12mm
RED
SCREW (J)
7mm
BLACK
*NOTE 2:
LOOKING TAB
LOOKING TAB
ANALOG Y/C C.B.A.
AV DIGITAL C.B.A.
LOCKING TAB (i)
LOCKING TAB (i)
FP3201
LOCKING TAB (d)
AUDIO C.B.A.
MOTOR POWER C.B.A.
LOCKING TAB (d)
P3701
P2502
SCREW (D)
SCREW (E)
*NOTE2: LOCKING TAB (b)
*NOTE2: LOCKING TAB (c)
P6707
POWER SUPPLY C.B.A.
LOCKING TAB (i)
P1290

Fig. D-6

3-2. Disassembly/Assembly Procedures for Mechanism

3-2-1. Disassemble Flow Chart for Mechanism

This procedure starts with the condition that the mechanism unit has been removed from the unit.
The following chart indicates disassembly steps of the mechanical parts in order to gain access to part for servicing. When reinstalling, perform the steps in reverse order.

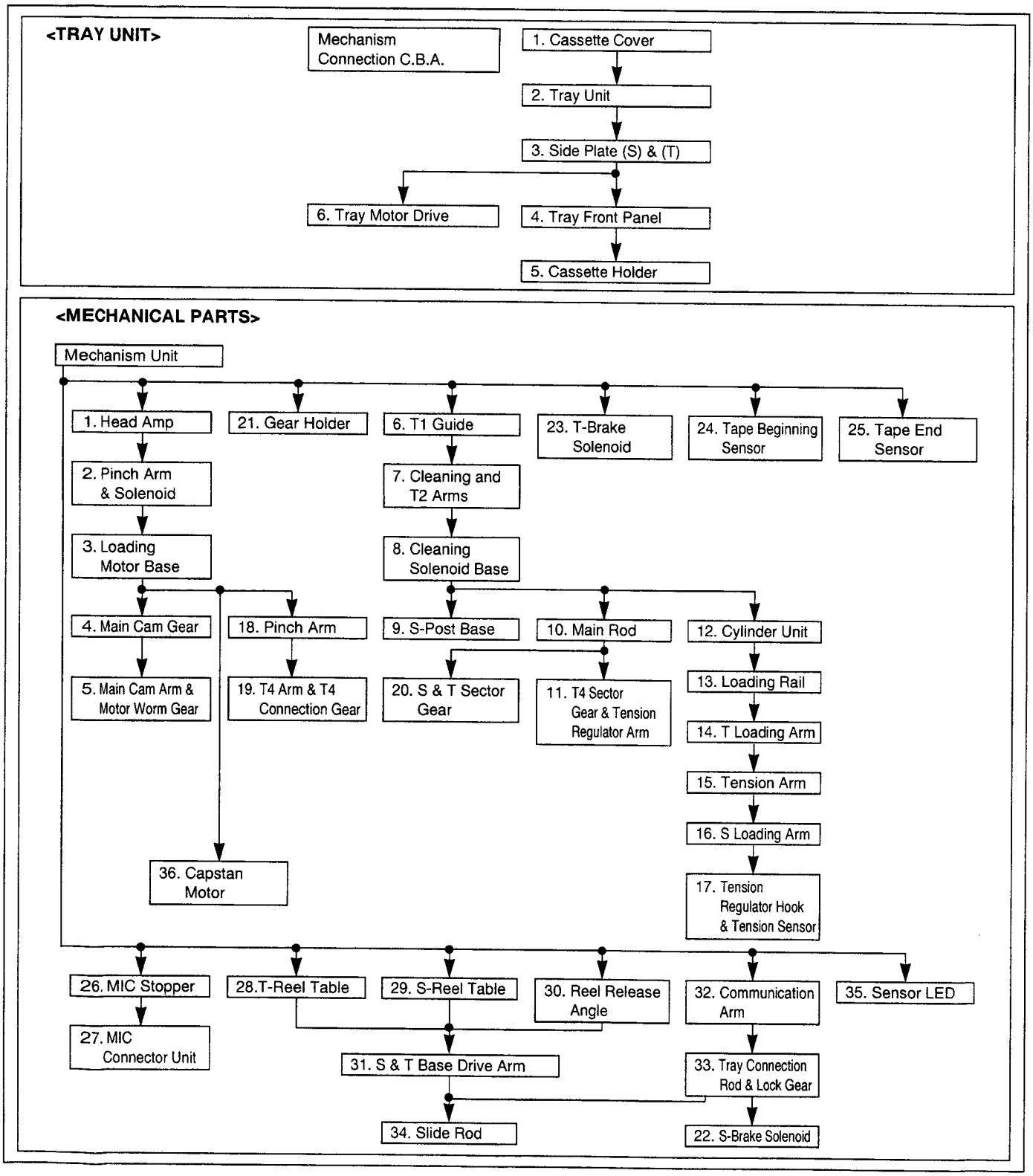


Fig. 2-1 Flow Chart

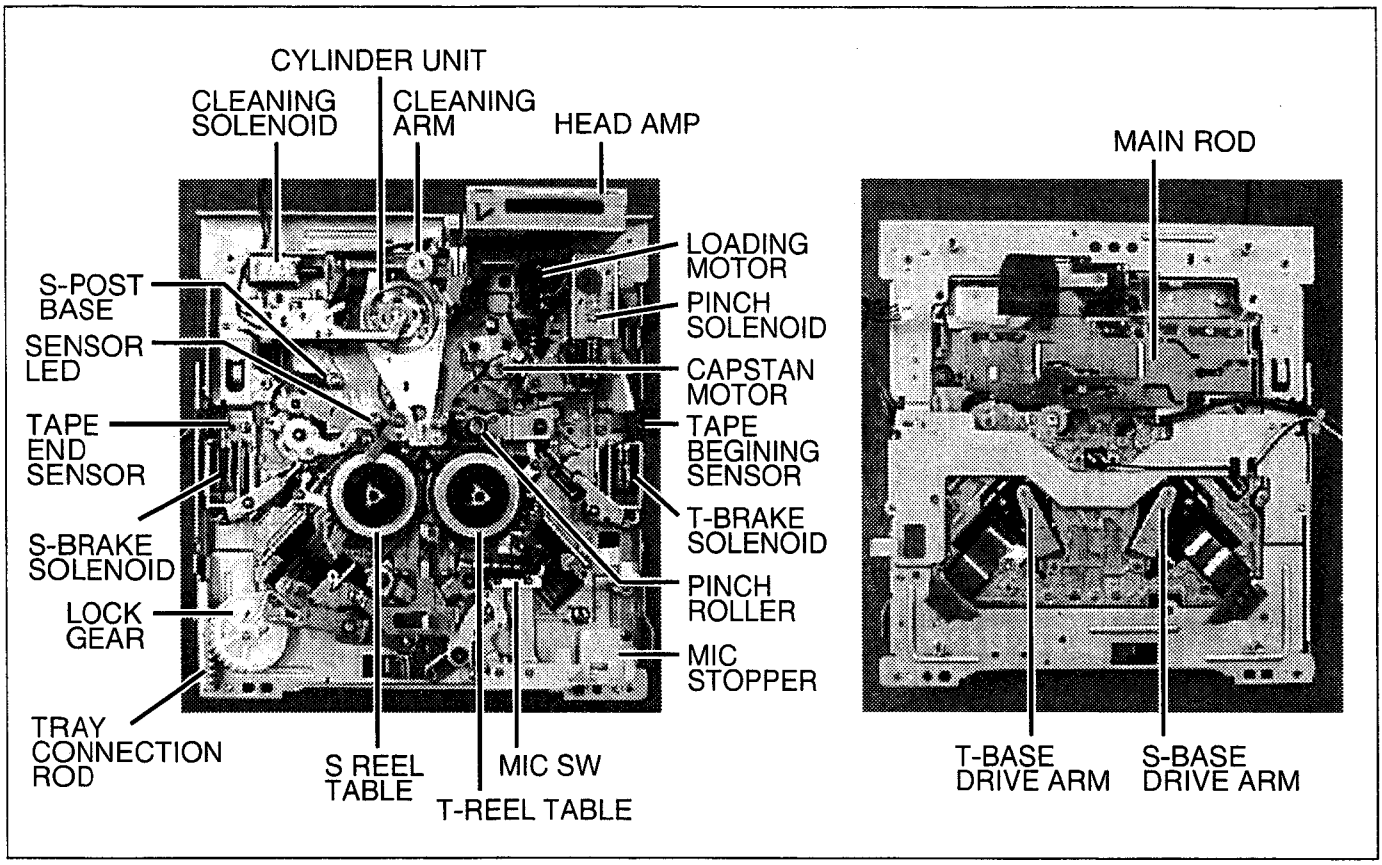


Fig. 2-2

3-2-2. Disassembly/Assembly Procedures (for Mechanical Parts)

1. Mechanism Connection C.B.A.

Unscrew 4 screws and disconnect following connectors.

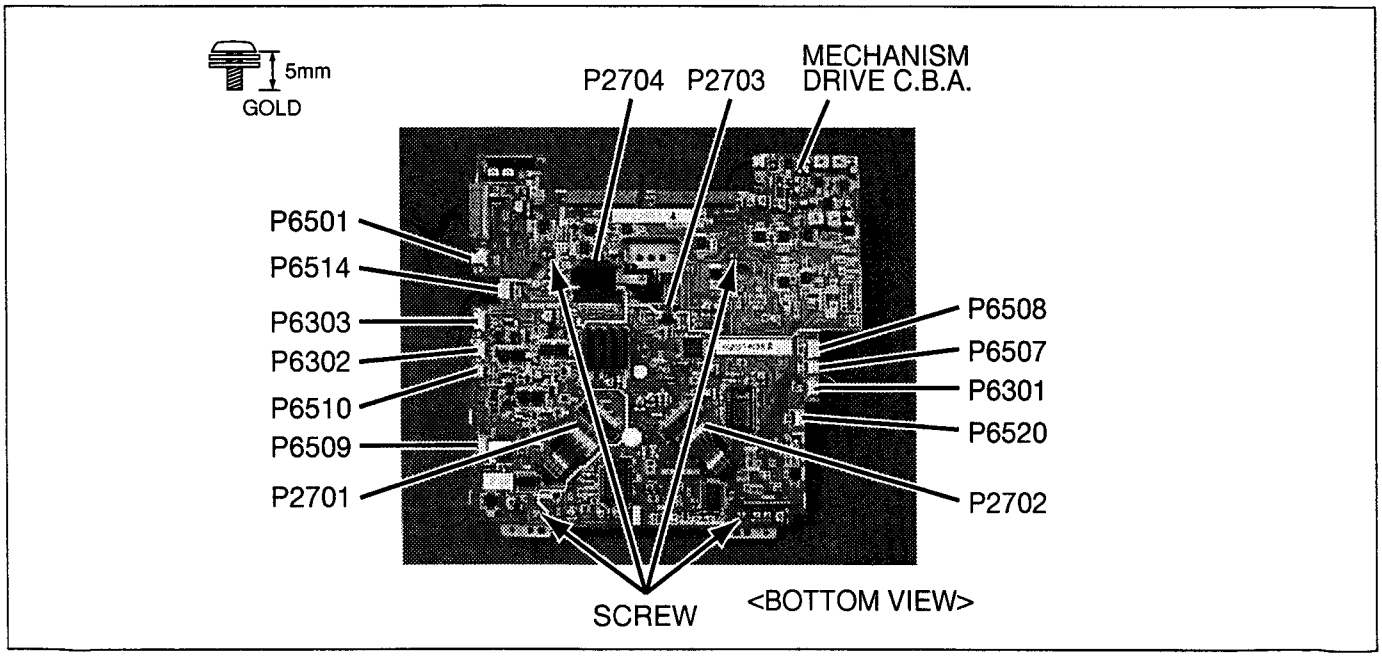


Fig. 2-3

2. Tray Unit

2-1. Cassette Cover

Fig. T-1 Set the Mechanism to Tray open position. Unscrew 2 screws (A), then slide the Cassette Cover and unhook the hooking portion.

Fig. T-2 When the Tray can not be opened normally, slowly turn the Tray Drive Shaft until the Tray is fully opened

2-2. Tray Unit

Fig. T-3 Unscrew 4 screws (B) and disconnect P6502 when Mechanism Drive C.B.A. is connectedto Mechanism Unit.

Fig. T-4 Since the Side Plate (S) is located underneath the Tray Connection Rod, then shift the Side Plate (S) in the front direction and lift it up.

Note of installation

Fig. T-5 Push the Tray Connection Rod in the rear direction and install the Tray Unit so that the Reel Shaft on the Side Plate (S) meets the groove on the Tray Connection Rod.

2-3. Side Plate (S) and (T)

Fig. T-6 Set the Pinion Gear so that the projection (A) is aligned to the Dot Mark on the Rack (S) and (T) and remove the Side Plate (S) and (T).

Note of installation

Fig. T-10 Confirm the position of the Cassette Change Lever. (Down position)

Fig. T-7 Install the Pinion Gear so that the projection (B) on the pinion Gear is aligned to the hole on the Tray Drive Shaft Gear.

Fig. T-6 Install the Side Plate (S) and (T) so that the projection (A) is aligned to the dot mark on the Rack (S) and (T).

2-4. Tray Front Panel

Fig. T-8 Unscrew 2 screws (C) and unlock 4 locking tabs (A), then remove the Tray Front Panel.

2-5. Cassette Holder

Fig. T-9 Slightly open the S and T Rack Unit and slowly remove the Cassette Holder from the Groove on the S and T Rack Unit.

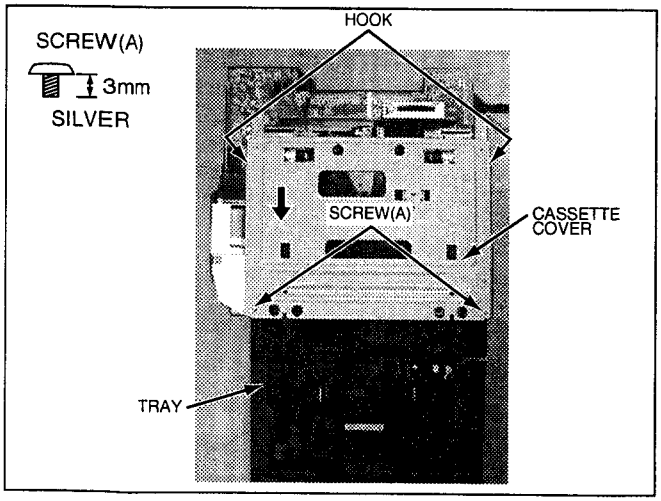


Fig. T-1

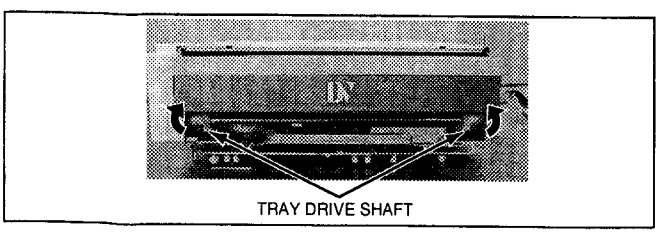


Fig. T-2

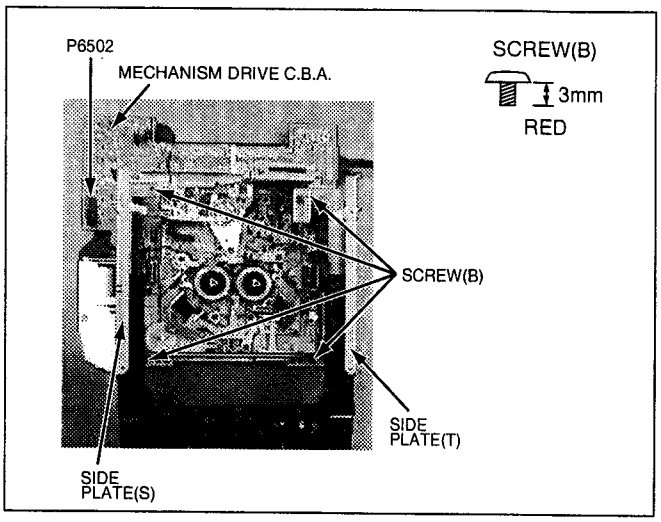


Fig. T-3

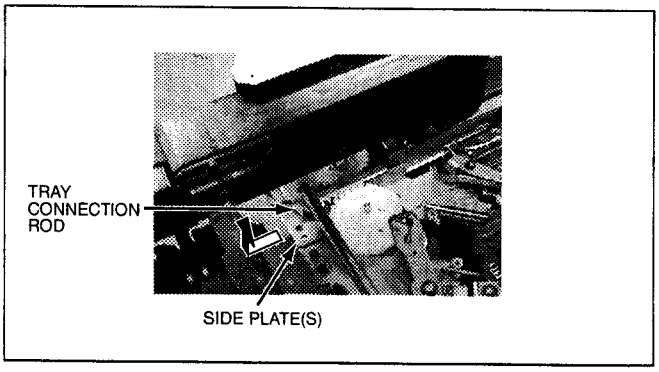


Fig. T-4

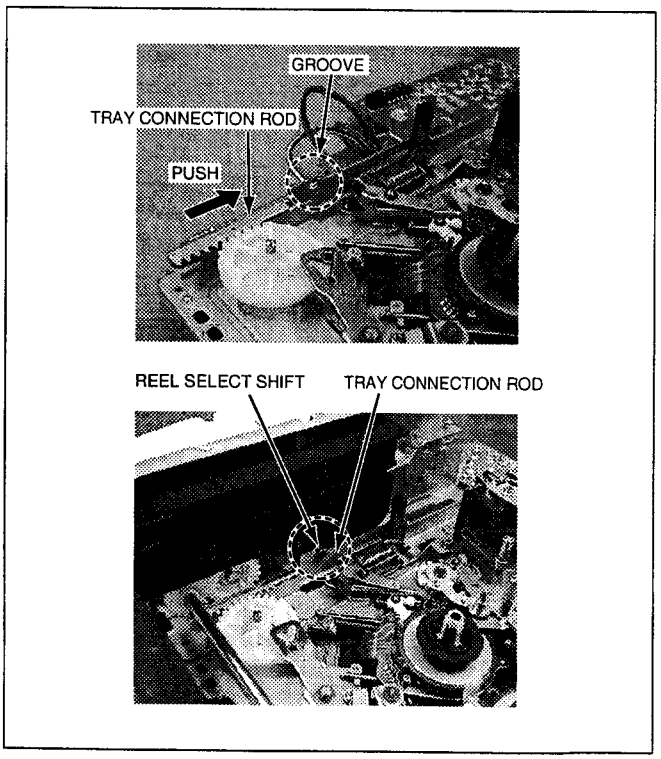


Fig. T-5

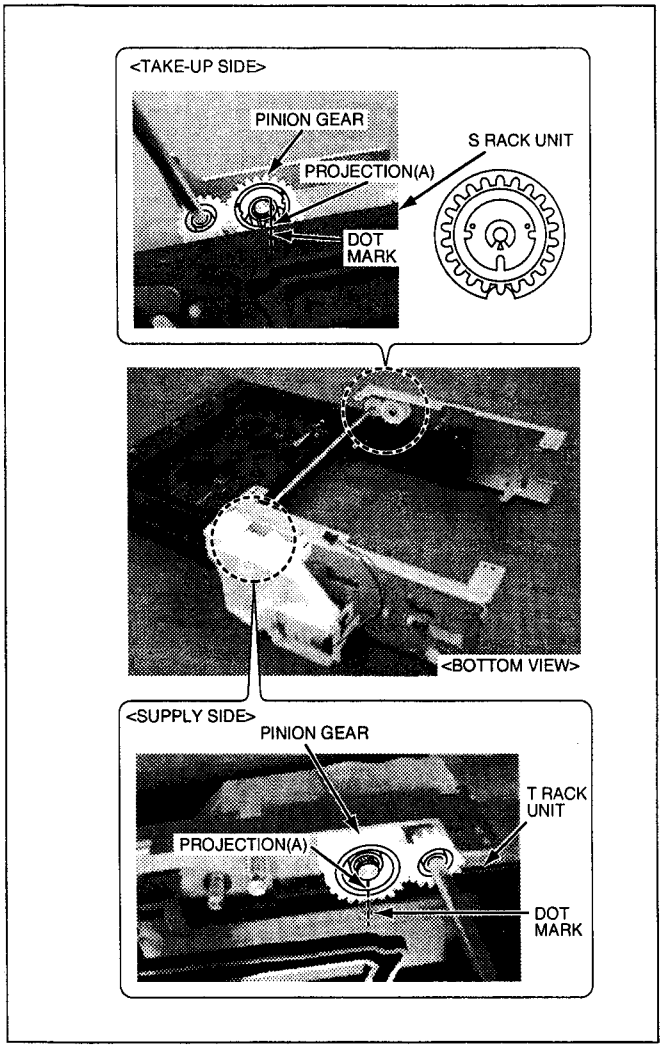


Fig. T-6

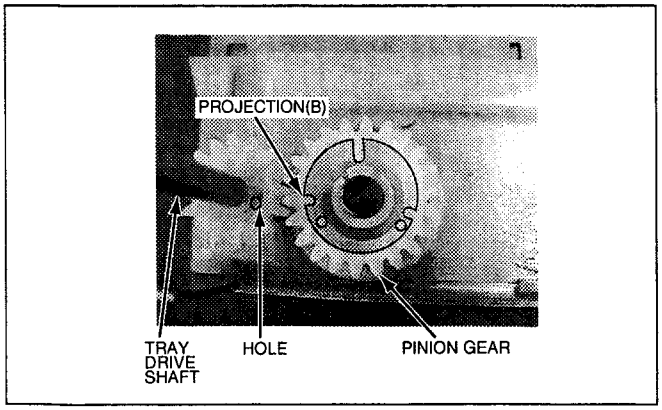


Fig. T-7

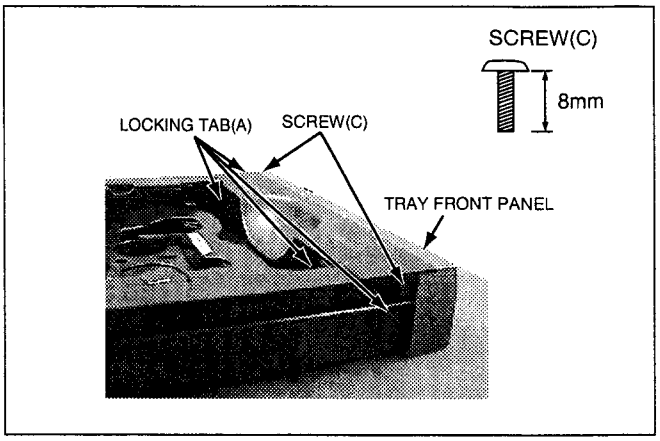


Fig. T-8

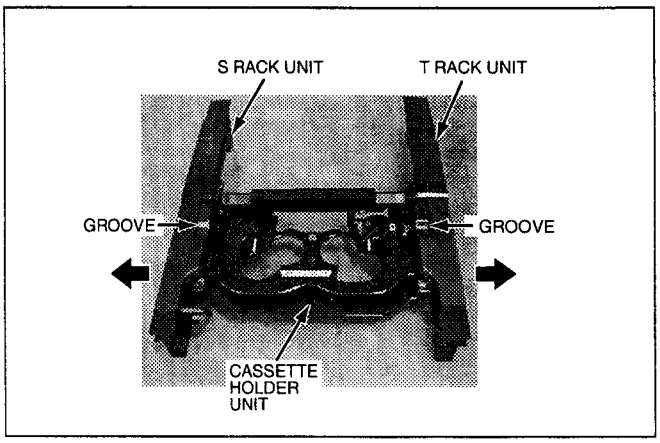


Fig. T-9

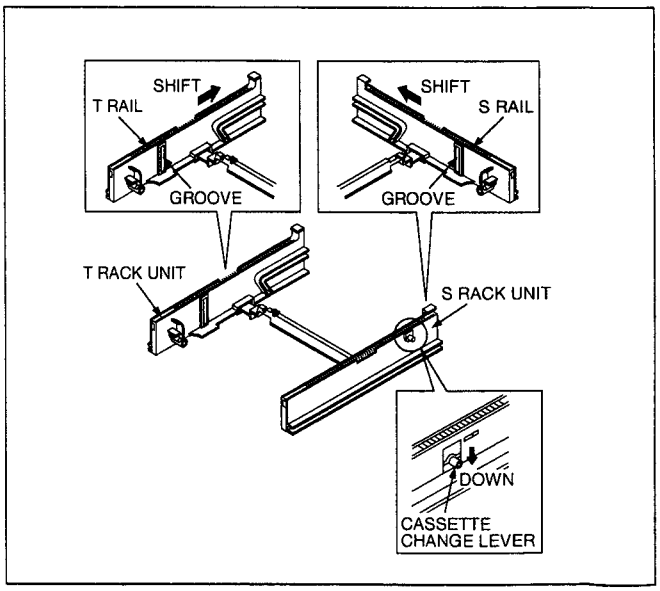


Fig. T-10

Note of installation

Fig. T-10 Shift the S and T Rail on the S and T Rack Unit to makethe Tray down condition.

Fig. T-11 Install the Cassette Holder Unit so that the projection (C) on the Cassette Holder meets the groove on the S and T Rack unit.

2-6. Tray Motor Drive Unit

Fig. T-12 Unlock 3 locking tabs (B) and remove the Tray Motor Drive Unit.

Fig. T-13 Remove the Syncro. Drive Gear, Worm Foil Gear, Worm Gear and Tray Motor.

3. Mechanical Parts

3-1. Head AMP

Fig. M-1 Unscrew 2 screws (E).

Fig. M-2 Slide the Shield Case in up direction and remove the Shield Case.
Disconnect FP5001.

3-2. Pinch Solenoid and Pinch Arm

Fig. M-3 Unscrew 2 screws (F) and remove Cut Washer.
Shift the Pinch Solenoid in left direction and remove thePinch Solenoid and Pinch Arm.

3-3. Loading Motor Base

Fig. M-4 Unscrew 5 screws (G) and (H) and remove the Loading Motor Base.

Note of installation

Fig. M-7 Set the Motor Worm Gear to the Loading Motor Shaft.

Fig. M-5 Install the Loading Motor Base so that the projection (D)on the Mode SW meets the Hole on the Main Cam Gear.

3-4. Main Cam Gear

Fig. M-6 Remove the Main Cam Gear.

3-5. Main Cam Arm and Motor Worm Gear

Fig. M-7 Remove the Main Cam Arm and Motor Worm Gear.

Note of installation

Fig. M-8 Install the Main Cam Arm so that the projection (E) on the Main Cam Arm meets the hole on the Main Rod.

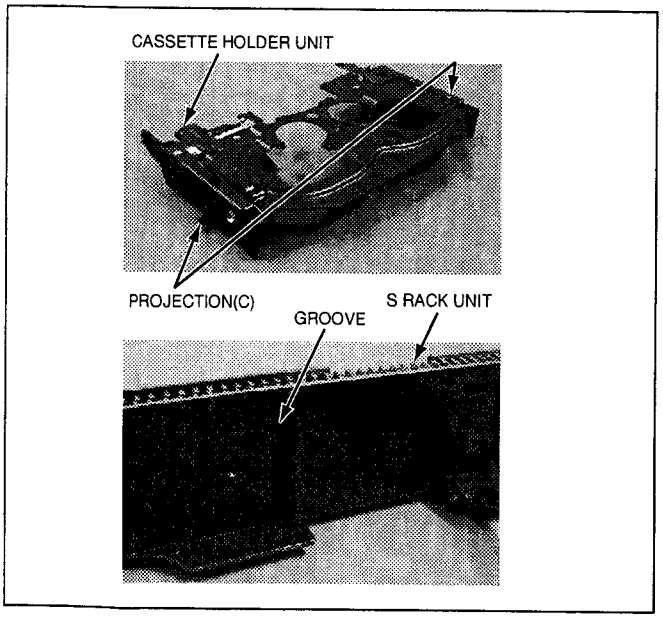


Fig. T-11

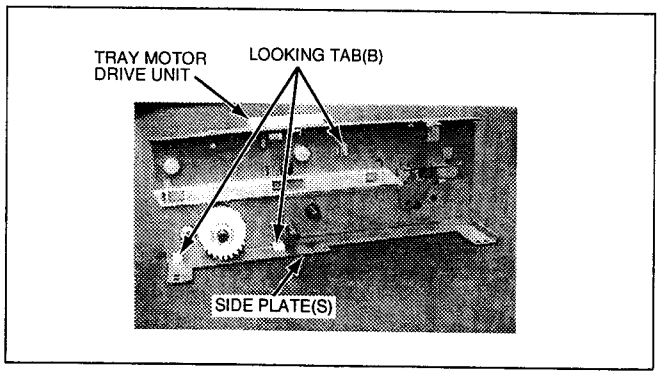


Fig. T-12

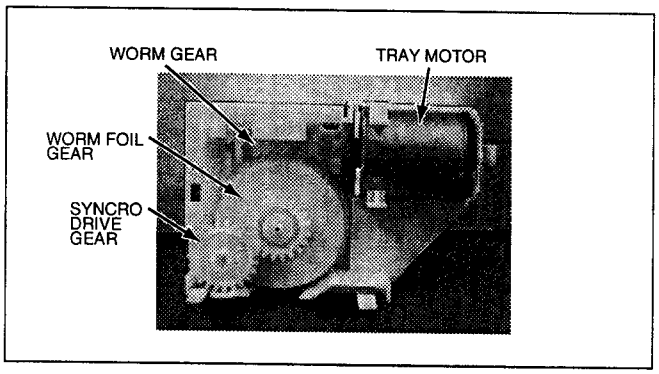
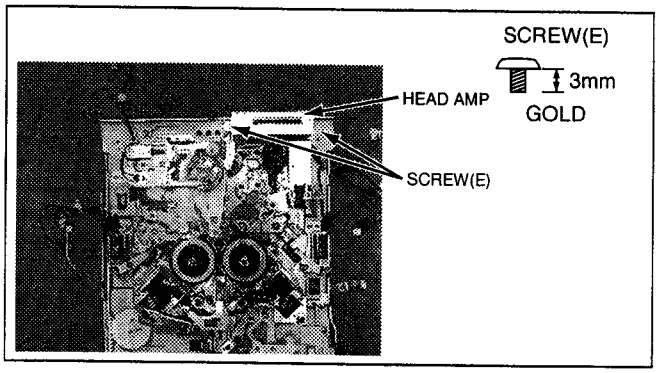


Fig. T-13



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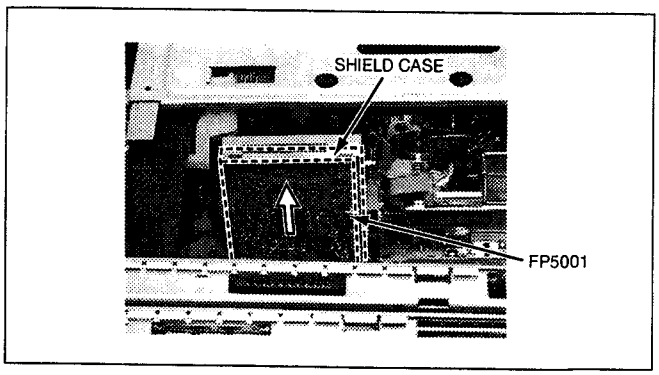
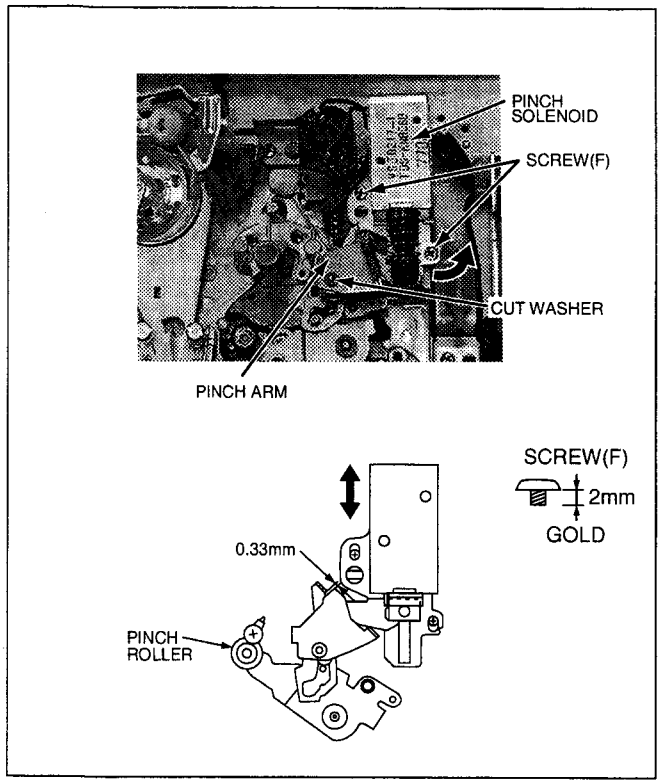


Fig. M-2



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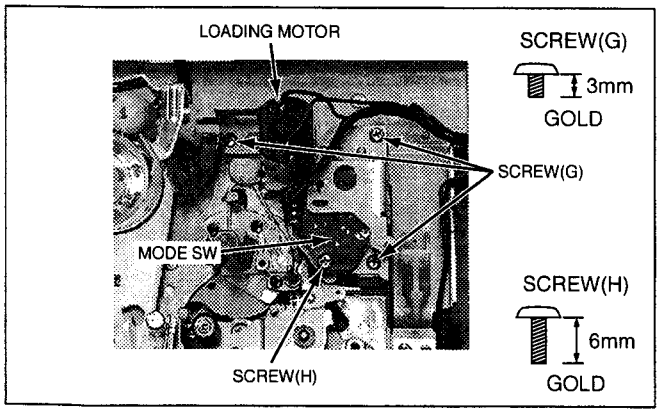


Fig. M-4

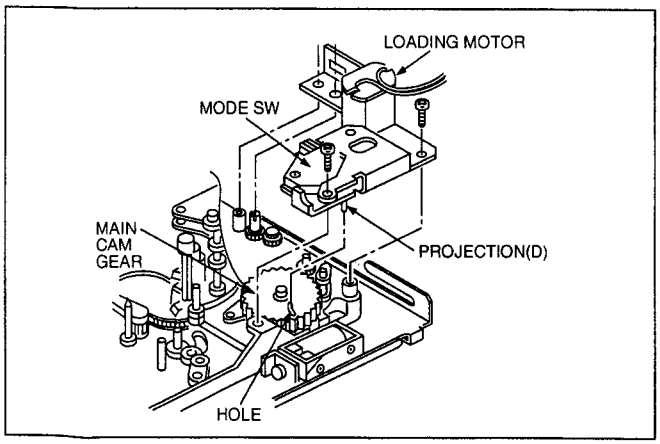


Fig. M-5

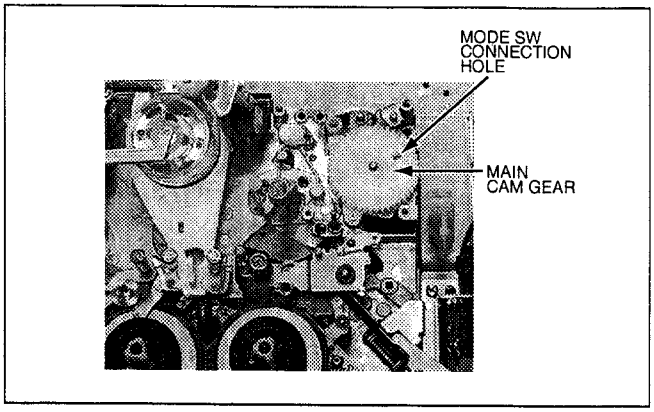


Fig. M-6

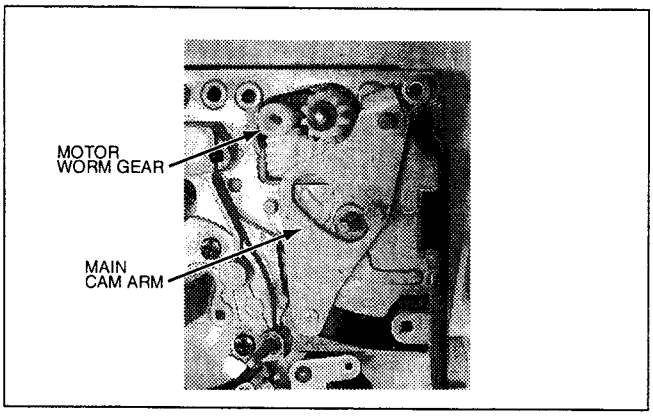


Fig. M-7

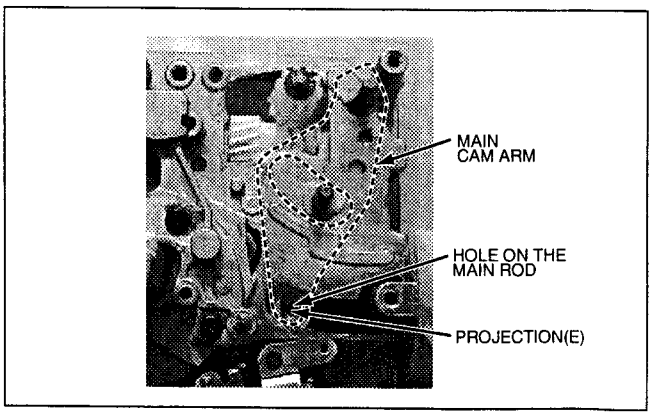


Fig. M-8

3-6. T1 Guide

Fig. M-9 Unscrew 2 screws (I) and remove the T1 Guide.

3-7. Cleaning Arm and T2 Arm

Fig. M-10 Unhook the Cleaning Spring.
Unlock the locking portion of the Cleaning Arm.
Remove the T2 Arm with Spring.

3-8. Cleaning Solenoid Base and Cleaning Solenoid

Fig. M-11 Unscrew 3 screws (J) and remove the Cleaning Solenoid Base.

Fig. M-12 Unscrew 2 screws (K) and remove the Cleaning Solenoid.

Note of installation

Fig. M-10 Adjust the Cleaning Solenoid Base so that the gap between the Cylinder and Cleaning Arm becomes 1.0mm +/- 0.1mm.
Confirm that the Cleaning Roller rotates when the Cleaning Solenoid is turned on in the play mode.

3-9. S-Post Base

Fig. M-13 Unscrew 1 screw (L) and remove the S-Post Base.

3-10. Main Rod

Fig. M-14 Slide the Main Rod and remove it.
When the Cleaning Solenoid Base is not removed;
Slightly shift the Cleaning Solenoid Base in direction and slide the Main Rod since the Main Rod is stopped by Cleaning Solenoid Base.

Note of installation

Fig. M-15 Install the Main Rod so that the each drive shaft meets the groove of the Main Rod. To lock the Main Rod, slide it in left direction.

3-11. T4 Sector Gear and Tension Regulator Arm

Fig. M-16 Remove the T4 Sector Gear and Tension Regulator Arm.

Note of installation

Fig. M-17 Install the T4 Sector Gear so that the alignment hole of the T4 Sector Gear is aligned to the alignment gear of the T4 Arm.

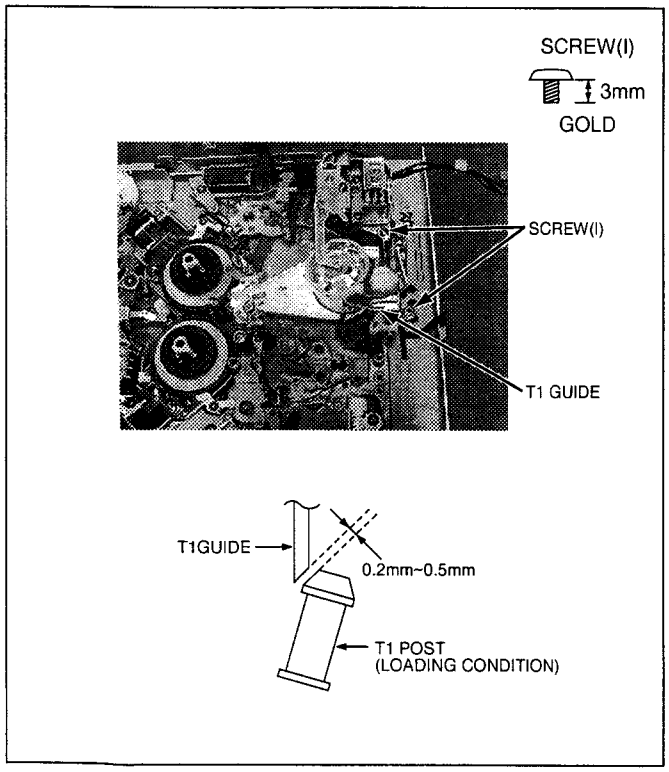


Fig. M-9

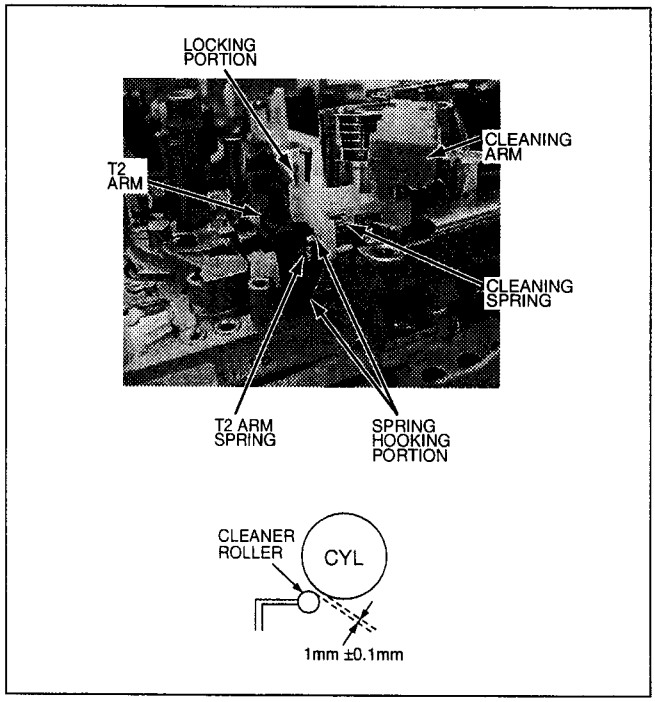


Fig. M-10

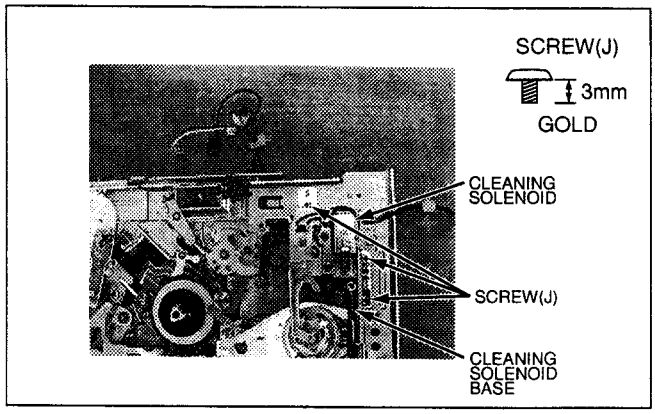


Fig. M-11

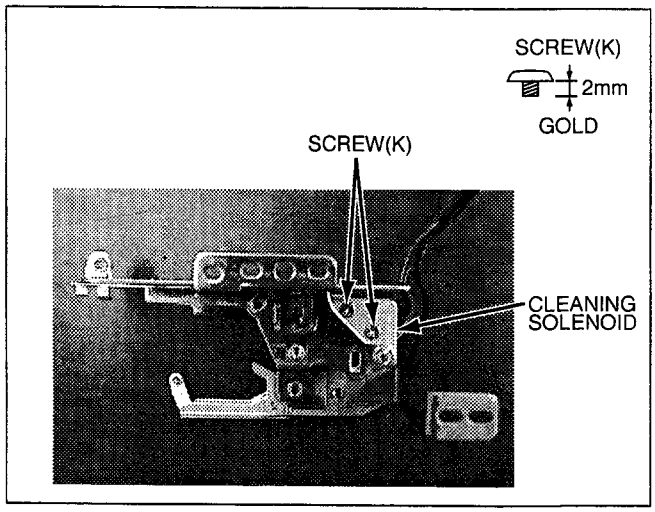


Fig. M-12

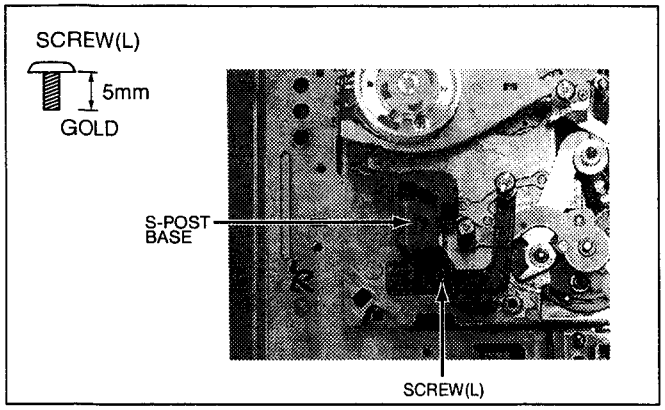


Fig. M-13

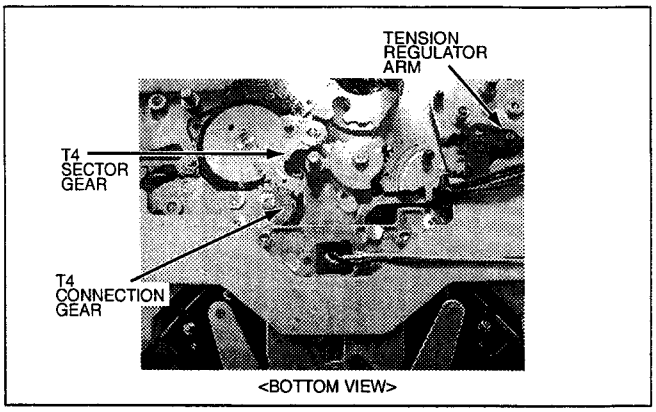


Fig. M-16

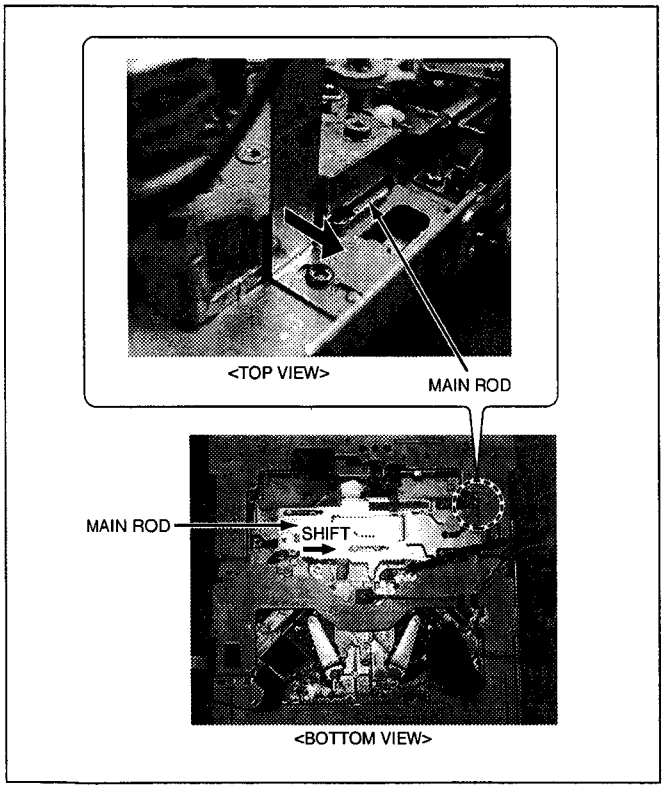


Fig. M-14

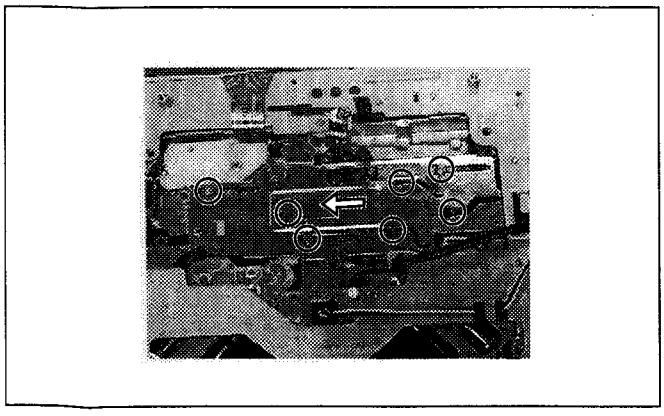


Fig. M-15

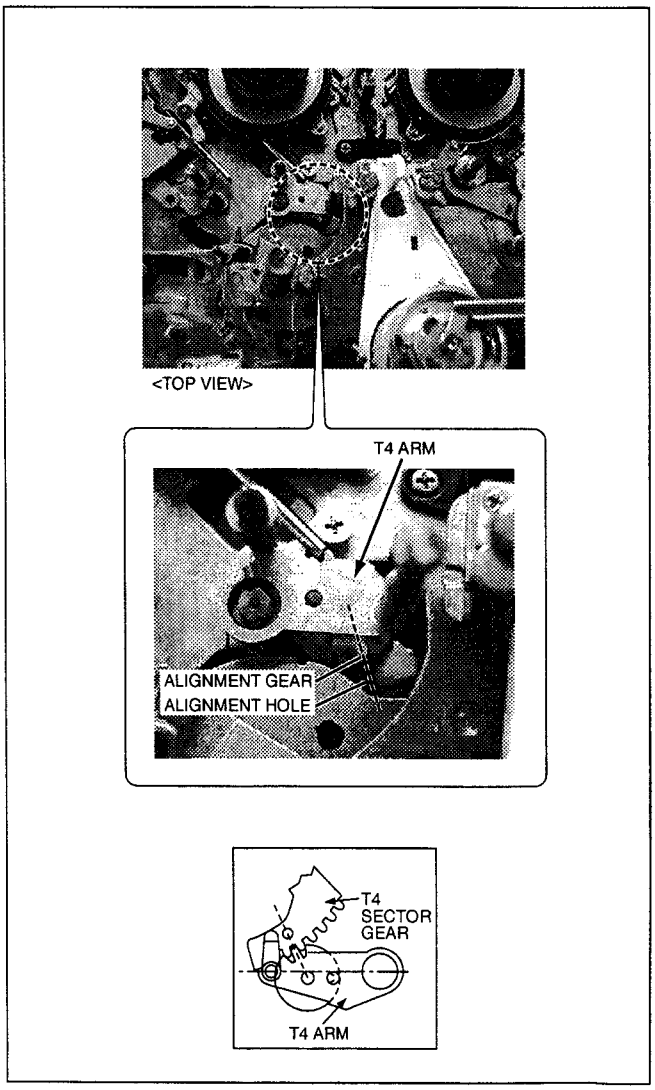


Fig. M-17

3-12. Cylinder Unit

Fig. M-18 Unscrew 4 screws (M) and (N). Then remove the Cylinder Unit carefully.

Fig. M-19 When removing or installing the Cylinder Unit, use extreme care so as not to damage the flexible cable.

3-13. Loading Rail

Fig. M-20 Unscrew 2 screws (O) and (P). Then slightly lift up the Loading Rail and slowly remove the S and T Loading Posts from the top side of the Loading Rail.

Note of installation

Fig. M-20 Install the S and T Loading Posts to the Loading Rail and set the Loading Rail to the chassis. Then install 2 screws (O) and (P).

3-14. T Loading Arm (Post)

Fig. M-21 Remove the E-Ring, washer and T Loading Arm.
When replacing the T Loading Arm, perform the "Mechanical Adjustment Procedures".

Note of installation

Fig. M-21 Install the T Loading Arm so that the hole on the gear of the T Loading Arm is aligned to the hole on the T Sector Gear.

3-15. Tension Arm

Fig. M-22 Remove the cut washer and unhook the spring, thenremove the Tension Arm.
When replacing the Tension Arm, perform the "Mechanical Adjustment Procedures".

3-16. S Loading Arm (Post)

Fig. M-23 Remove the E-Ring, washer and S Loading Arm.
When replacing the S Loading Arm, perform the "Mechnical Adjustment Procedures".

Note of installation

Fig. M-23 Install the S Loading Arm so that the hole on the gear of the S Loading Arm is aligned to the hole on the S Sector Gear.

3-17. Tension Regulator Hook and Tension Sensor

Fig. M-24 Unscrew 1 screw (Q) located under the S Brake Solenoid, washer and Tension Sensor.
Remove the cut washer and Tension Regulator Hook.
When replacing the Tension Sensor, perform the "Mechanical Adjustment Procedures".

Note of installation

Fig. M-25 After installed Tension Sensor, confirm the position of the Tension Sensor cable.

3-18. Pinch Arm

Fig. M-26 Remove the cut washer and Pinch Arm with spring.

Note of installation

Fig. M-26 Confirm the hooking portion of the spring.

3-19. T4 Arm and T4 Connection Gear

Fig. M-27 Remove the Nylon Nut using tweezers or box driver (2.5mm).
Remove the washer, spring and T4 Arm.

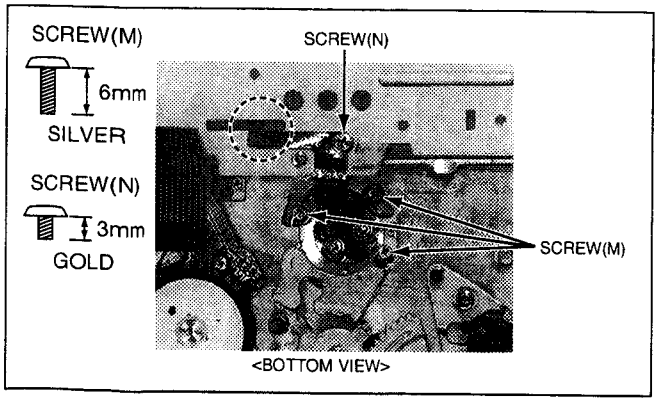


Fig. M-18

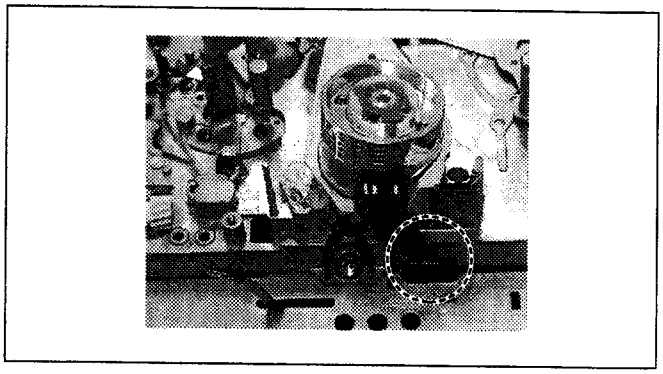


Fig. M-19

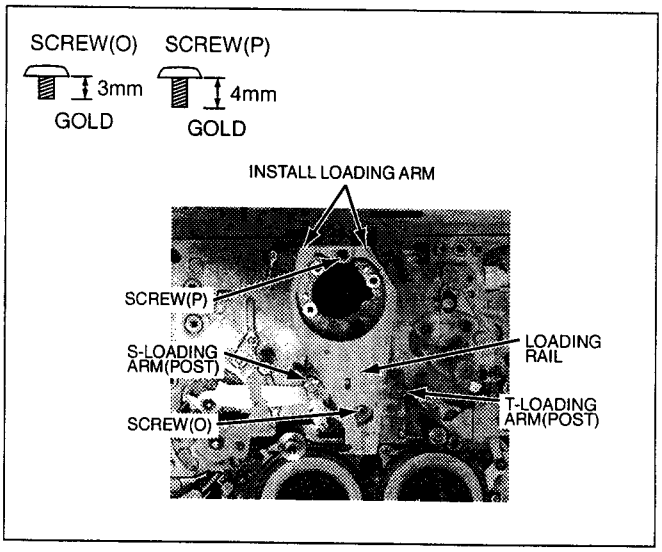


Fig. M-20

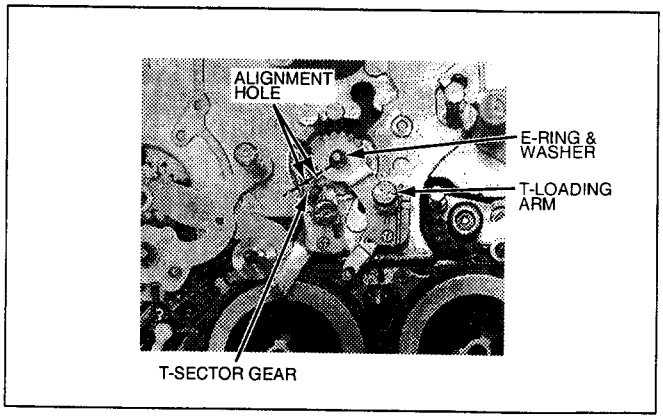


Fig. M-21

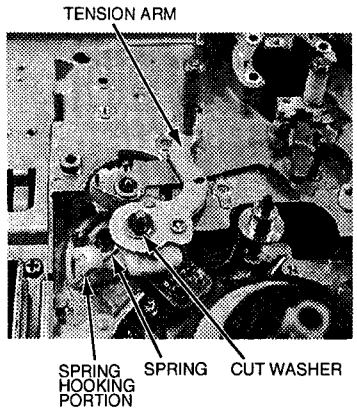


Fig. M-22

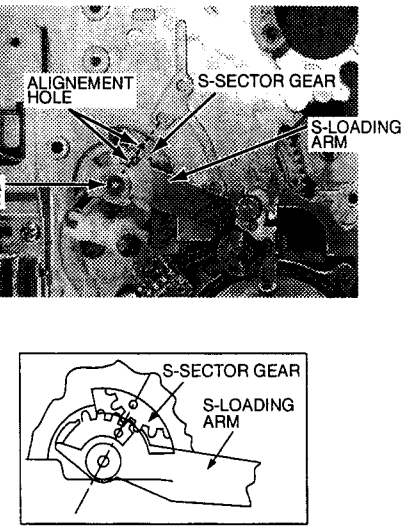


Fig. M-23

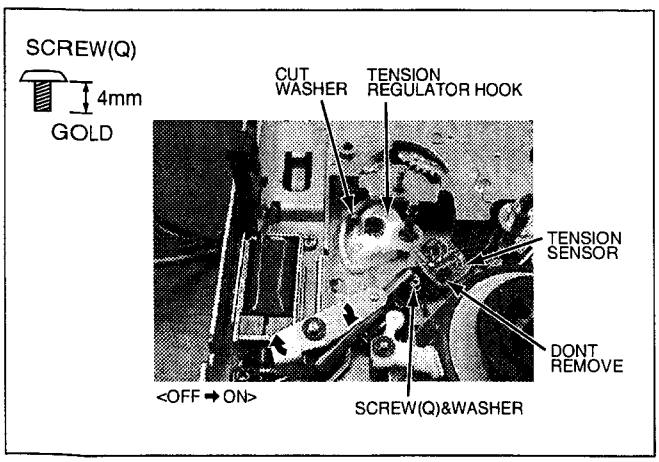


Fig. M-24

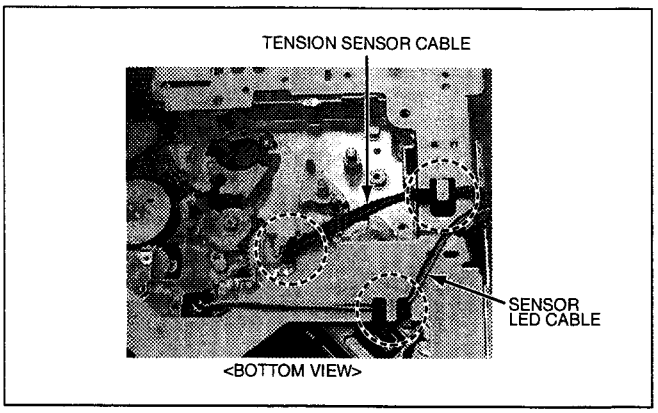


Fig. M-25

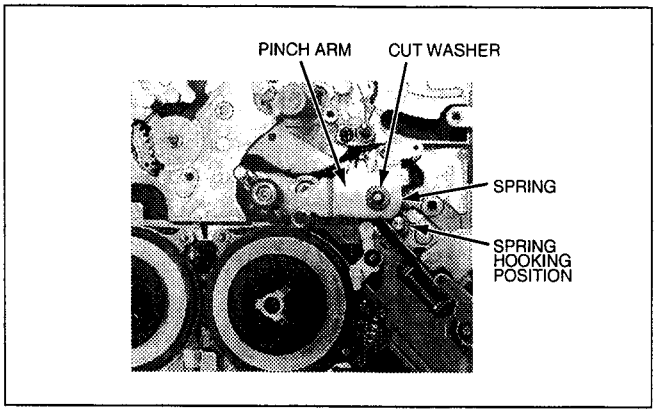


Fig. M-26

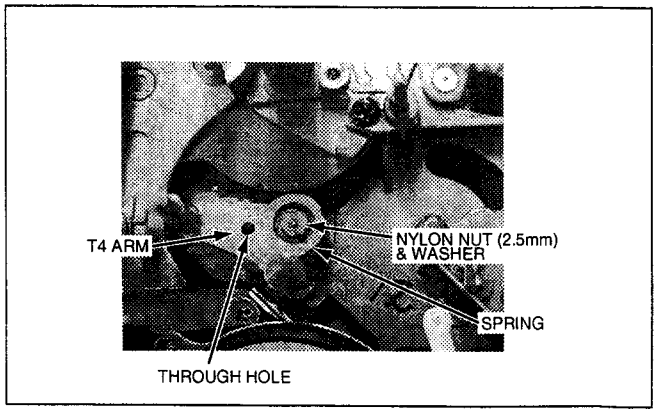


Fig. M-27

Fig. M-28 Remove the cut washer and T4 Connection Gear. When replacing the T4 Arm and/or T4 Connection Gear, perform the " Mechanical Adjustment Procedures".

Note of installation

Fig. M-28 Install the T4 Connection Gear and cut washer.

Fig. M-27 Install the T4 Arm so that the through hole on the T4 Arm is aligned to the alignment hole on the T4 Connection Gear as shown in Fig. M-28.

3-20. S and T Sector Gear

Fig. M-29 Turn the S and T Sector Gears to clockwise and remove these Gears.

3-21. Gear Holder

Fig. M-30 Unscrew 2 screws (R) and remove the Gear Holder.

Note of installation

Fig. M-30 When installing the Gear Holder, confirm the position of the flexible cable of the Capstan Motor.

3-22. S-Brake Solenoid

Fig. M-31 Unscrew 2 screws (S). When removing the S-Brake Solenoid, the Tray Connection Rod must be removed because of the connector of the Solenoid is located between the Chassis and Tray Connection Rod.

Note of installation

Fig. M33 Adjust the S-Brake Solenoid so that the gap between the S-Brake and S-Reel Table becomes 0.2 to 0.5 mm (just release).

3-23. T-Brake Solenoid

Fig. M-32 Unscrew 2 screws (T) and remove the T-Brake Solenoid.

Note of installation

Fig. M33 Adjust the T-Brake Solenoid so that the gap between the T-Brake and T-Reel Table becomes 0.2 to 0.5 mm (just release).

3-24. Tape Beginning Sensor (T Sensor)

Fig. M-34 Unlock the locking portion and remove the Tape Beginning Sensor.

3-25. Tape End Sensor (S Sensor)

Fig. M-35 Unlock the locking portion and remove the Tape End Sensor.

3-26. MIC Stopper

Fig. M-36 Unscrew 2 screws (U) and remove the MIC Stopper.

3-27. MIC Connector Unit

Fig. M-37 Unscrew 1 screw (V) and remove the cut washer and MIC Connector Unit.

Note of installation

Fig. M-37 Install the MIC Connector Unit so that the projection (F) meets the hole on the MIC Connector Unit.

3-28. T Reel Table

Fig. M-38 Unscrew 4 screws (W) and remove the T Reel Table with 2 shifts.

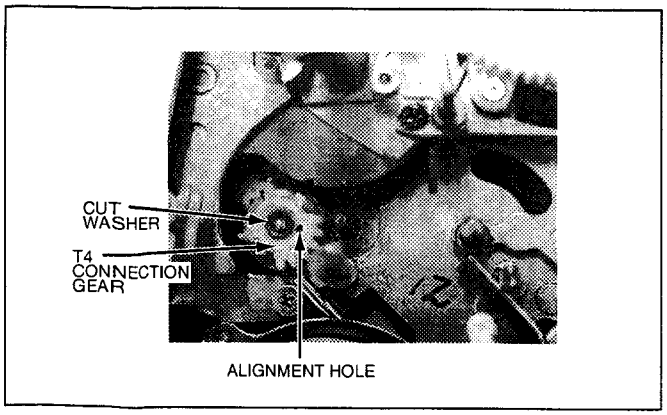


Fig. M-28

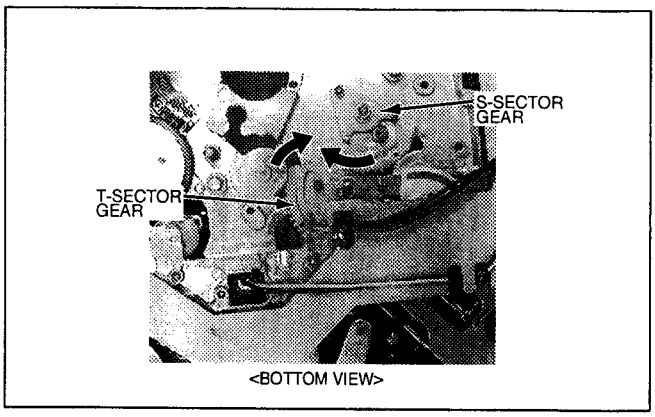


Fig. M-29

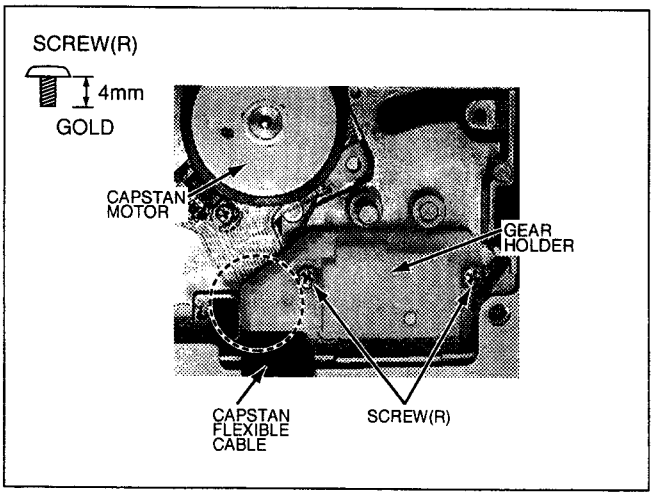


Fig. M-30

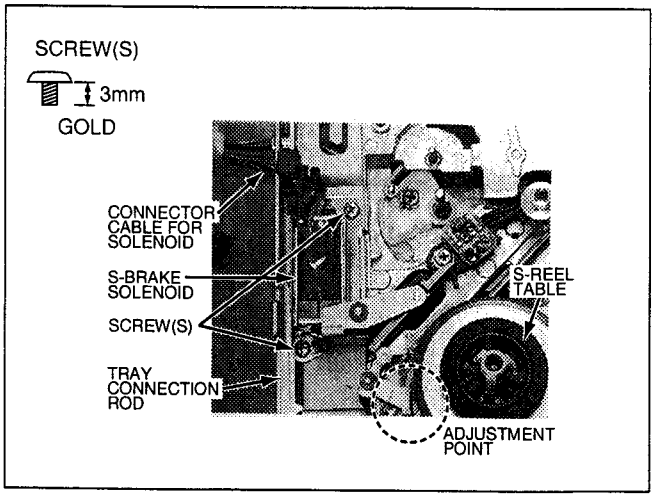


Fig. M-31

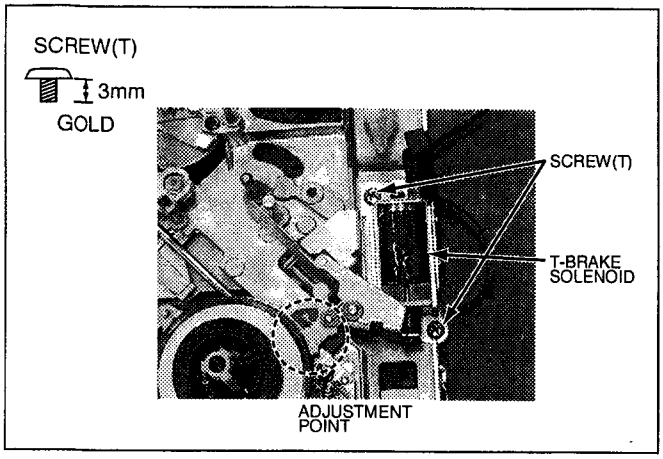


Fig. M-32

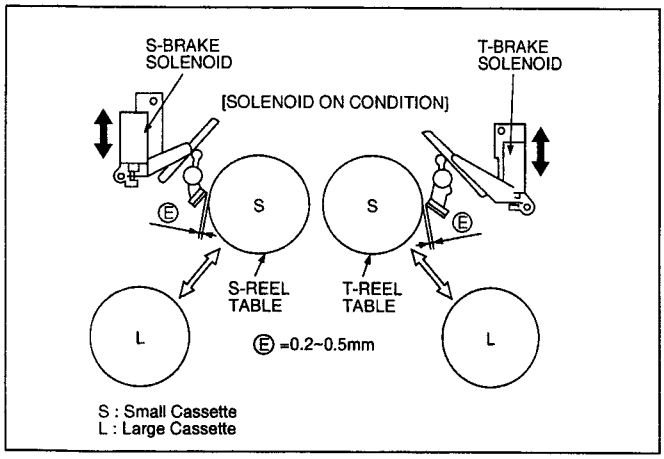


Fig. M-33

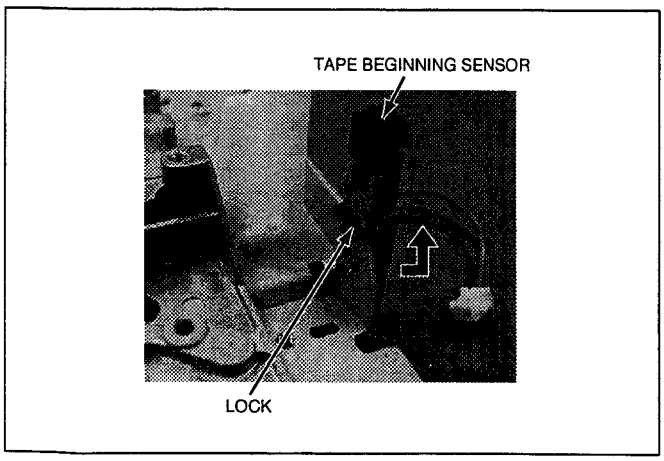


Fig. M-34

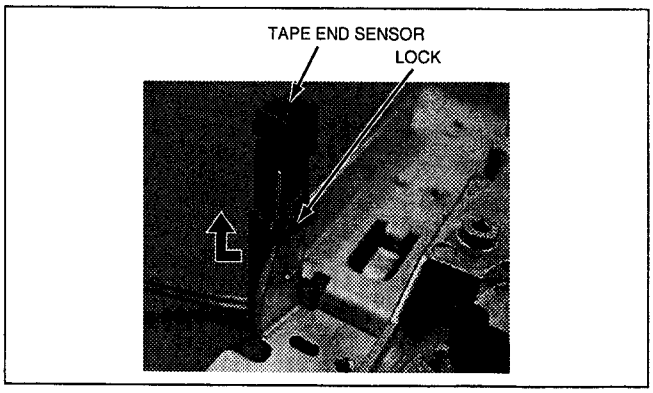


Fig. M-35

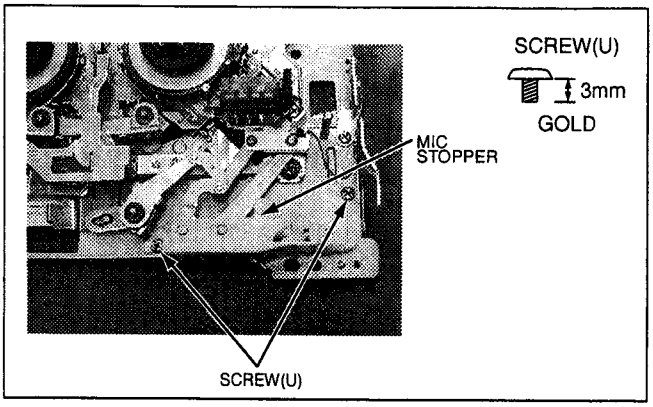


Fig. M-36

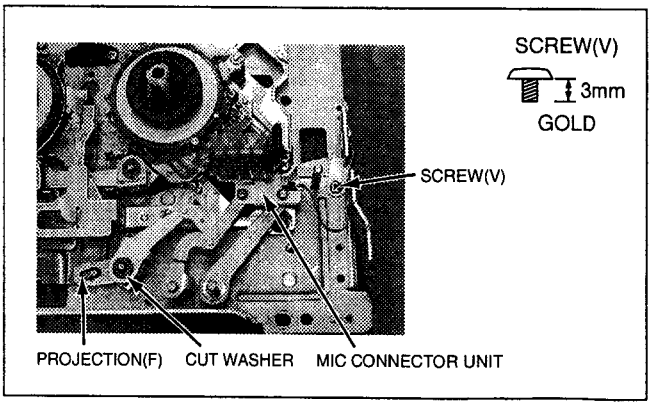


Fig. M-37

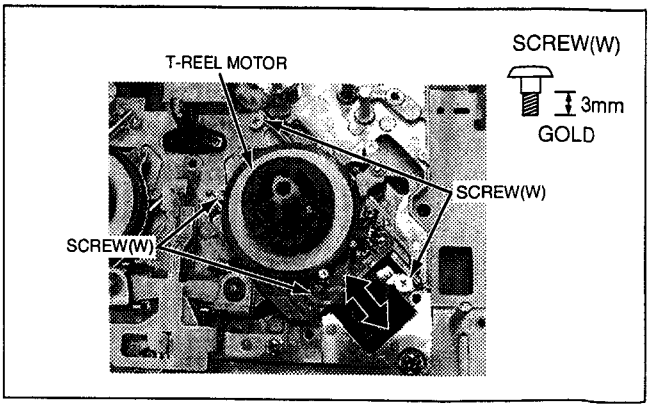


Fig. M-38

Note of installation

Fig. M-40 Set the inner and outer shafts to the T Reel Table.

Fig. M-41/42 Install the T Reel Table with 2 shafts so that the groove under the T Reel Table meets the projection (G) on the T Base Drive Arm.
Then install 4 screws (W).

3-29. S Reel Table

Fig. M-39 Unscrew 4 screws (X) and remove the S Reel Table with 2 shifts.

Note of installation

Fig. M-40 Set the inner and outer shafts to the S Reel Table.

Fig. M-41/42 Install the S Reel Table with 2 shafts so that the groove under the S Reel Table meets the projection (G) on the S Base Drive Arm.
Then install 4 screws (X).

3-30. Reel Release Angle

Fig. M-42 Unscrew 2 screws (Y) and remove the Reel Release Angle.

3-31. S and T Base Drive Arm

Fig. M-43 Remove the cut washer, S and T Base Drive Arms.

Note of installation

Fig. M-43 Install the S and T Base Arms so that the projections (H) on the S and T Base Arms meet the groove on the Slide Rod.

3-32. Communication Arm

Fig. M-44 Remove the cut washer and Communication Arm.

3-33. Tray Connection Rod and Lock Gear

Fig. M-45 Pull the Tray Connection Rod in front direction to release the lock and remove it.
Remove the Lock Gear.

Note of installation

Fig. M-46 Install the Tray Connection Rod.
Then install the Lock Gear so that the hole on the Lock Gear is aligned to the hole on the Tray Connection Rod.

3-34. Slide Rod

Fig. M-47 Remove the cut washer and Slide Rod.

3-35. Sensor LED

Fig. M-48 Unscrew 1 screw (Z) and Sensor LED.

Note of installation

Fig. M-25 After installed Sensor LED, confirm the position of the Sensor LED cable.

3-36. Capstan Motor

Fig. M-49 Unscrew 3 screws (a) and Capstan Motor.

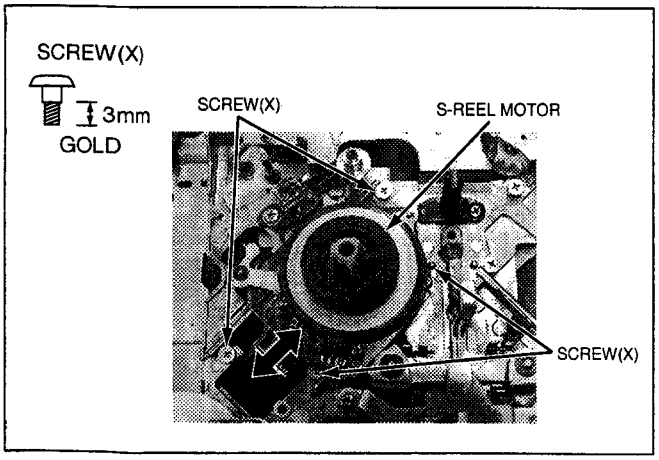


Fig. M-39

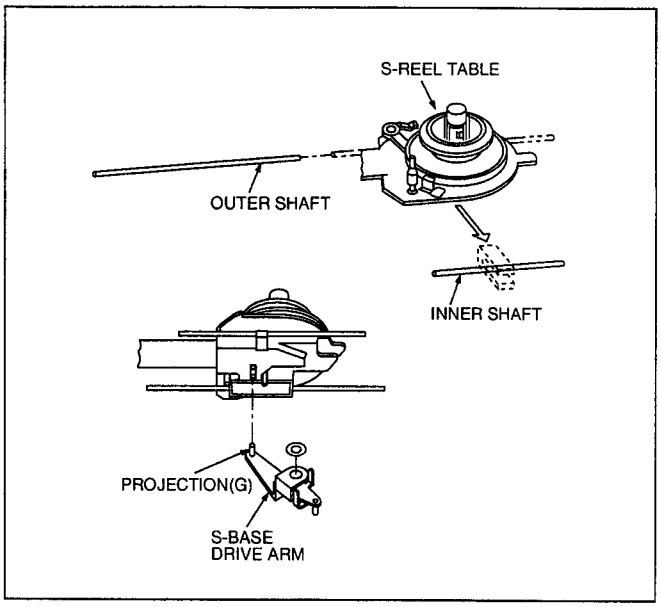


Fig. M-40

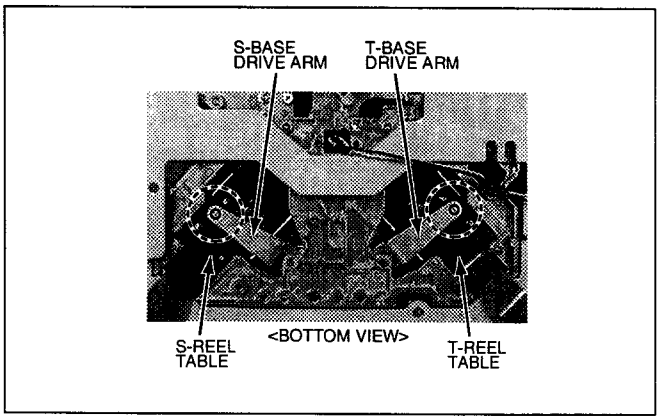


Fig. M-41

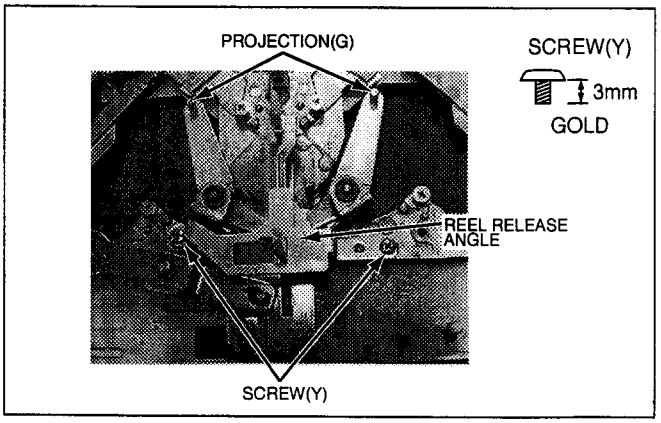


Fig. M-42

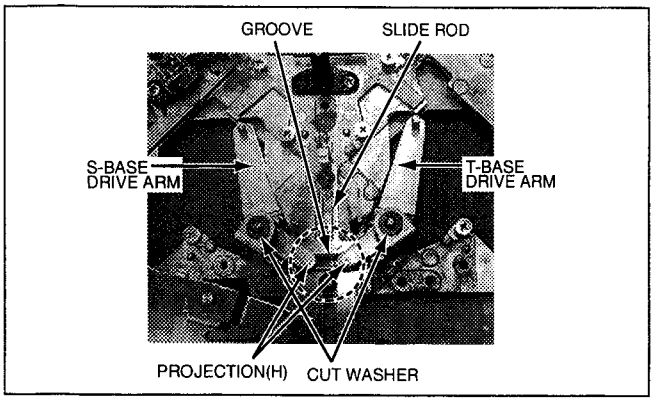


Fig. M-43

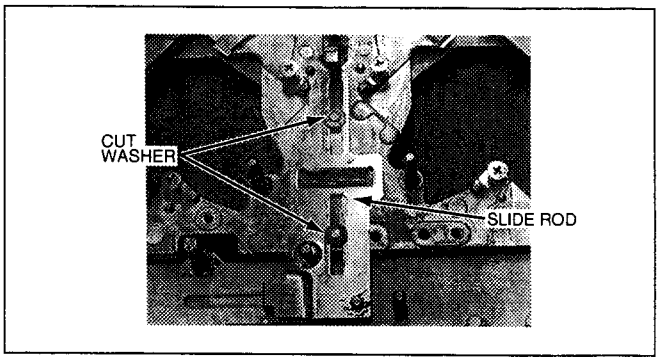


Fig. M-47

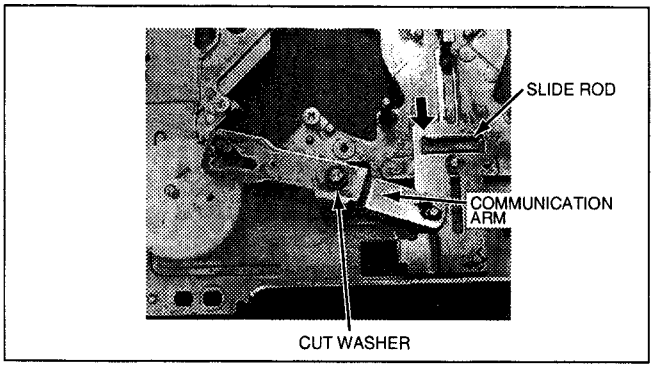


Fig. M-44

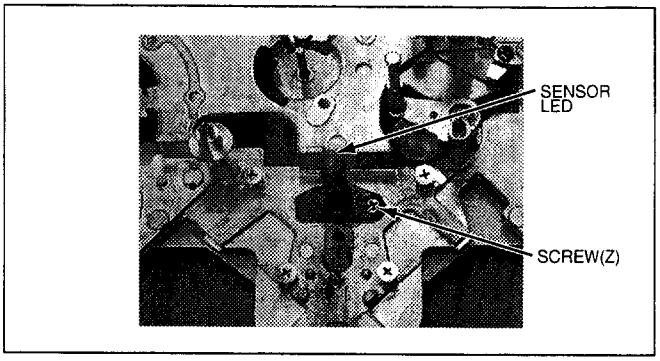


Fig. M-48

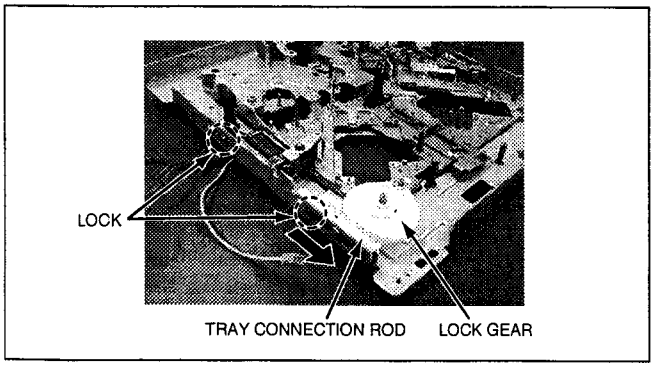


Fig. M-45

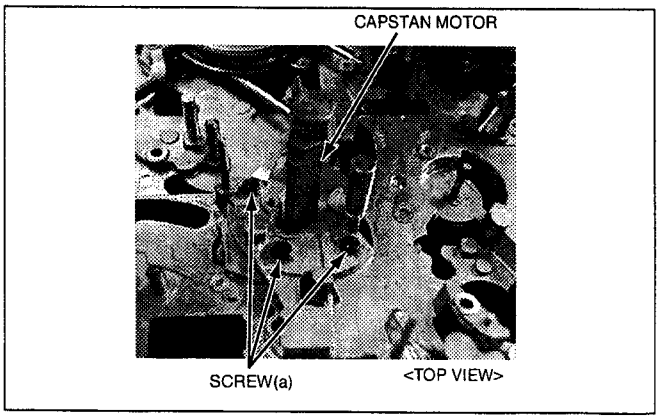


Fig. M-49

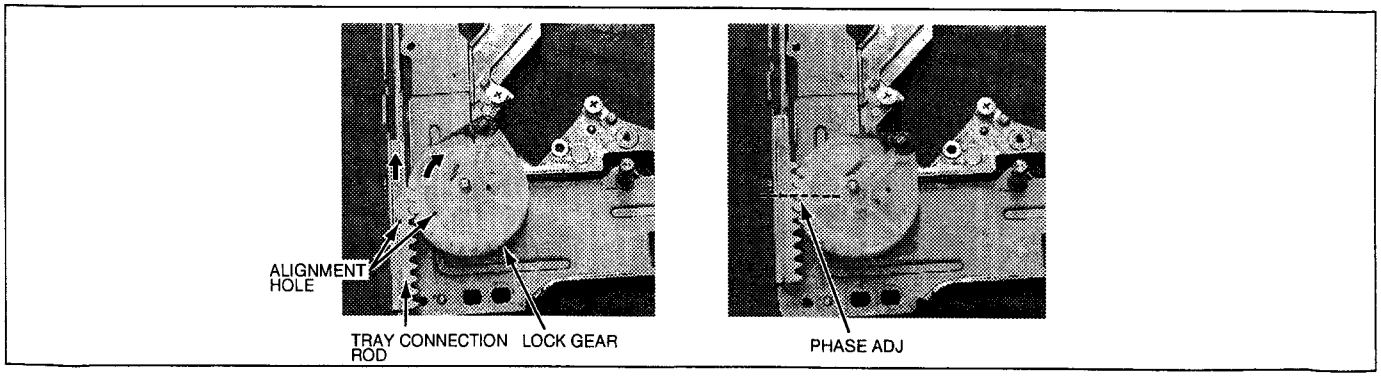


Fig. M-46

4. MECHANICAL ADJUSTMENT

4-1. Name of Tape Transportation

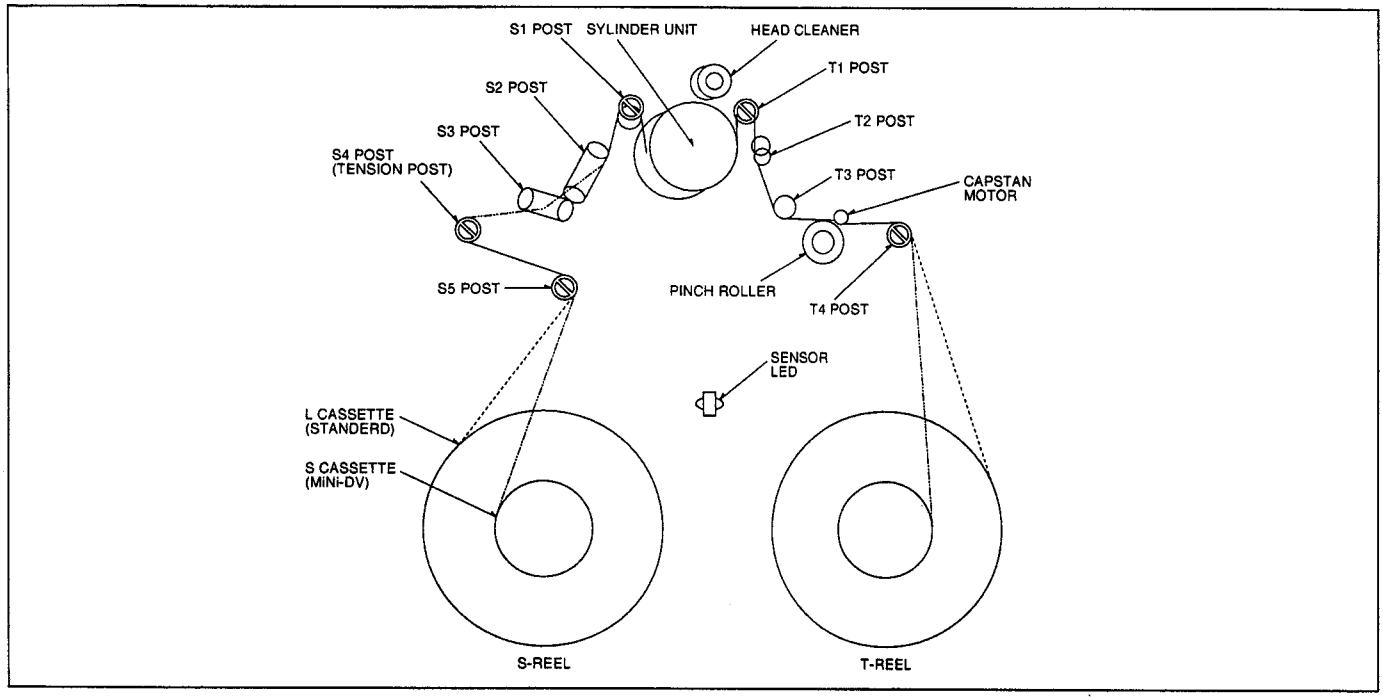


Fig. M-1

4-2. Cleaning Procedures

Make sure the power is off before cleaning. Use ethanol (more than 99% purity) as cleaning liquid.

4-2-1. Cleaning of Video Head

Clean heads by applying even pressure and rotating cylinder a few times. Never wipe in up and down motion. Never touch a cylinder by naked hand. First wipe with a cloth soaked by cleaning liquid. Then wipe with dry cloth.

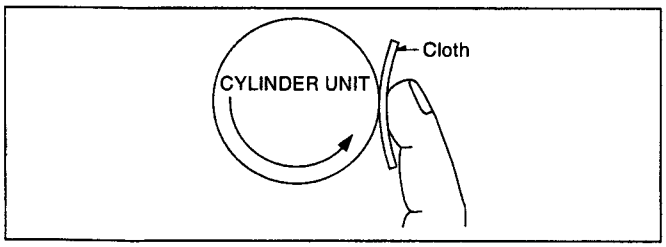


Fig. M-2

4-2-2. Cleaning of Drum Lead

Be careful not to touch a head chip. Clean the drum lead with a pick.

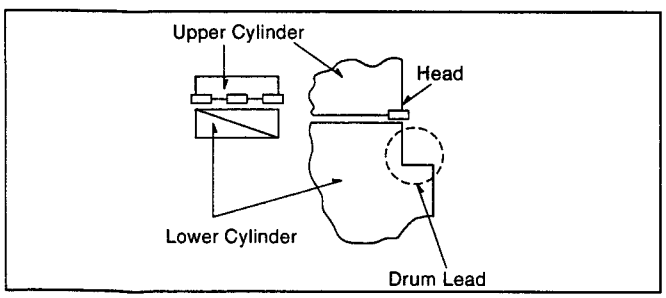


Fig. M-3

4-2-3. Cleaning of Pinch Roller and Capstan

Wipe the Pinch Roller and Capstan with a cloth soaked by cleaning liquid.

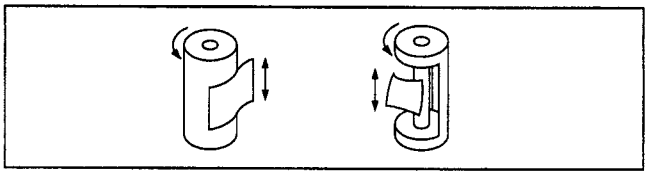


Fig. M-4

4-2-4. Cleaning of each Post

Wind a cloth on a pick. Wipe each post dry with that pick. Wipe again with a dry cloth. For metal posts wipe with cleaning liquid. Then wipe dry again.

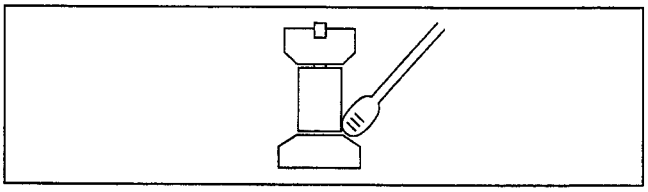


Fig. M-5

4-3. Reel Offset and Tension Arm Adjustment

Note:
Before beginning adjustment from the item 4-4., the "Reel Offset" and "Tension Arm Adjustment" described on the "5. Electrical Adjustment" must be done as shown in Fig. E-1.

4-4. T4, S4 and S5 Post Height Pre-Adjustment

Note :
Before this adjustment, the Servo Adjustment must be done.
(Refer to "SECTION 5. Electrical Adjustment".)

1. Confirm the Reel Table is located at L (Standard) cassette position. If it is located at S (Mini-DV) cassette position, turn power on and insert L cassette and eject the L cassette.
2. Turn power off. Remove the Front Loading Unit. Then place the Mech. Plate (VFK1348A) on the Reel Table.
3. Place the Post Height Adj. Tool (VFK1450) on the Mech. Plate as shown in Fig. M-6 and adjust the T4 post height by using the Box Driver (VFK1151).
4. Adjust the S4 and S5 post height by using the Post Driver (VFK1278).
5. Then turn S4 and S5 posts 1 round counterclockwise from lower limit position.

T4 Post : Lower Limit (-0.5 +/- 0.05 mm)
S4 Post : Lower Limit (+0.2 +/- 0.05 mm)
S5 Post : Lower Limit (+0.2 +/- 0.05 mm)

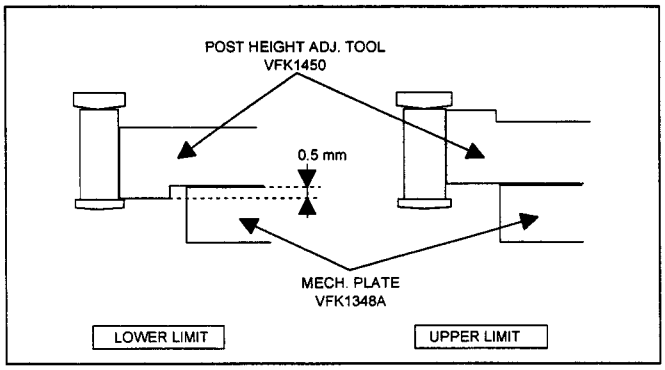


Fig. M-6

4-5. Tape Pass Adjustment Procedures

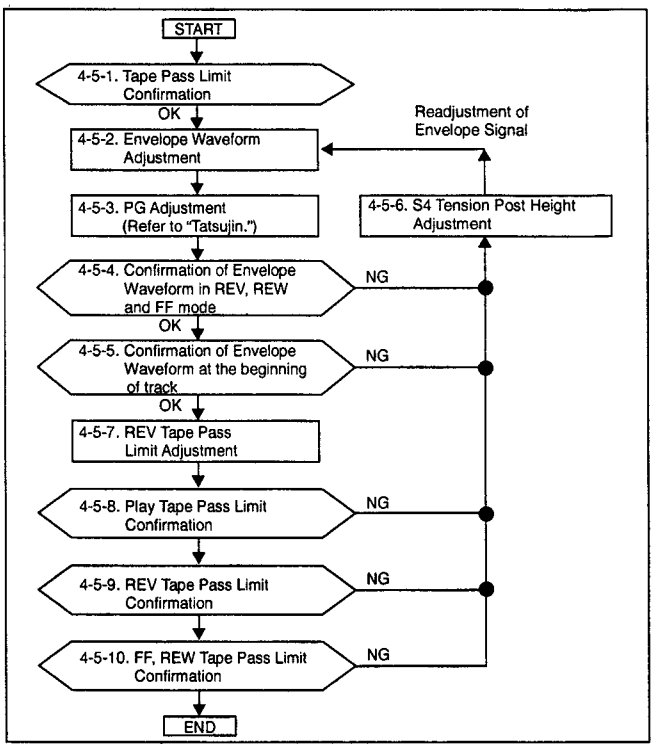


Fig. M-7

4-5-1. Tape Pass Limit Confirmation

1. Place unit into Play mode, and adjust the height of each post do not to occurred tape damage.
2. Regarding the S1 Post and T1 Post, refer to item "4-5-2. Envelope Waveform Adjustment".
3. Confirm the tape pass limit of each post as shown in Fig. M-8.

POST NAME	TAPE LIMIT							ADJUSTMENT PORTION	TAPE PASS LIMIT
	A	B	C	D	E	F	G		
4-5-1. Play Tape Pass Limit Confirmation									
S5 Post	×	×	○	○	×	×	×	S5 Post	Lower Limit
S4 (Tension) Post	×	×	×	○	×	×	×	S4 (Tension) Post	Lower Limit
S1 Post	×	○	×	×	×	×	×	S1 Post	Envelope Adjustment
T1 Post	×	○	×	×	×	×	×	T1 Post	Envelope Adjustment
T4 Post	×	×	○	×	×	×	×	T4 Post Arm Nut	Free Limit
4-5-7. REV Tape Pass Limit Adjustment									
S5 Post	×	○	○	○	×	×	×	S5 Post	Lower Limit
S4 (Tension) Post	×	×	○	○	×	×	×	S4 (Tension) Post	Lower Limit
S1 Post	×	○	×	×	×	×	×	S1 Post	Envelope Adjustment
T1 Post	×	○	○	○	×	×	×	T1 Post	Envelope Adjustment
T4 Post	×	×	○	×	×	×	×	T4 Post Arm Nut	Free Limit
4-5-8. Play Tape Pass Limit Confirmation									
S5 Post	×	×	○	○	×	×	×	S5 Post	Lower Limit
S4 (Tension) Post	×	×	×	○	×	×	×	S4 (Tension) Post	Lower Limit
S1 Post	×	○	×	×	×	×	×	S1 Post	Envelope Adjustment
T1 Post	×	○	×	×	×	×	×	T1 Post	Envelope Adjustment
T4 Post	×	×	×	○	×	×	×	T4 Post Arm Nut	Free Limit
4-5-9. REV Tape Pass Limit Confirmation									
S5 Post	×	○	○	○	×	×	×	S5 Post	Lower Limit
S4 (Tension) Post	×	○	○	○	×	×	×	S4 (Tension) Post	Lower Limit
S1 Post	×	○	×	×	×	×	×	S1 Post	Envelope Adjustment
T1 Post	×	○	○	○	×	×	×	T1 Post	Envelope Adjustment
T4 Post	×	○	○	○	×	×	×	T4 Post Arm Nut	Free Limit
4-5-10. FF / REW Tape Pass Limit Confirmation									
S5 Post	×	○	○	○	×	×	×	S5 Post	Lower Limit
S4 (Tension) Post	×	×	○	○	×	×	×	S4 (Tension) Post	Lower Limit
S1 Post	×	○	×	×	×	×	×	S1 Post	Envelope Adjustment
T1 Post	×	○	○	○	×	×	×	T1 Post	Envelope Adjustment
T4 Post	×	○	○	○	×	×	×	T4 Post Arm Nut	Free Limit

○ : means acceptable
× : means not acceptable

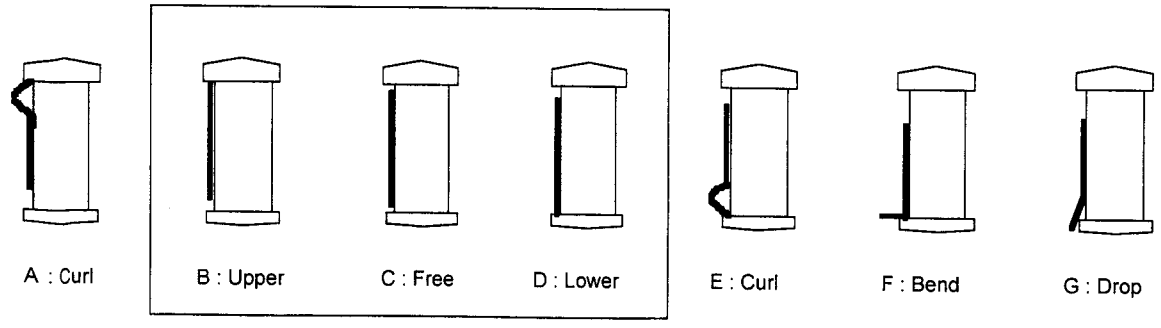


Fig. M-8

4-5-2. Envelope Waveform Adjustment

<Pre-Adjustment>

1. Hook up the PC EVR System as shown in Fig. 2-7 (Section 1). Then starts the RF / VITERBI Adjustment in the Video Section.
2. Connect the oscilloscope to "Envelope" and "GND" on the Measuring TP Board (VFK1409). Then playback the Alignment Tape (VFM3110EDS) and adjust S1 and T1 posts so that the envelope output is within following specification (Fig. M-9).
   Use "HID1" as a trigger.
   When the S1 and T1 posts are adjusted, first raise the post height and make small the entrance and exit side of the envelope, then down the post until envelope becomes flat.
3. Adjust T1 post and makes exit side of the envelope flat then adjust S1 post.

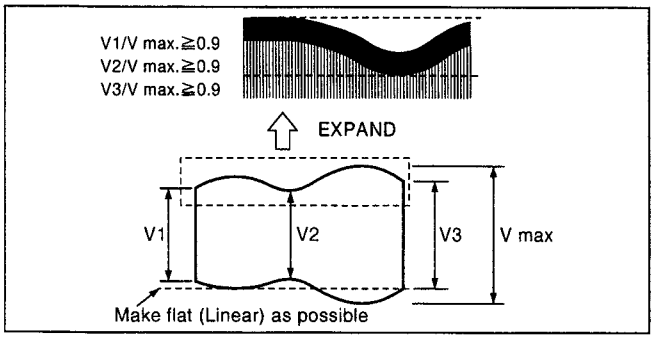


Fig. M-9

<Fine Adjustment>

1. Playback the self recorded tape and readjust S1 and T1 posts so that the BER counter number becomes the minimum.
2. After adjustment, unload the tape then loading the tape. Then confirm the waveform style and BER counter number is minimized.

4-5-3. PG Adjustment

Since the adjustment procedure for "PG Adjustment" is supported only "PC EVR System", refer to "PC EVR" software.

4-5-4. Confirmation of Envelope Waveform in REV, REW and FF mode

1. Hook up the PC EVR System as shown in Fig. 2-7 (Section 1).
2. Connect the oscilloscope to "Envelope" and "GND" on the Measuring TP Board (VFK1409).
3. Confirm the Envelope Waveform signal is in the specification in the REV, REW and FF mode as shown in Fig. M-10.
4. If it is out of specification, after adjusting the "4-5-6. S4 Tension Post Height Adjustment", confirm this "Envelope Waveform in REV, REW and FF mode" again.

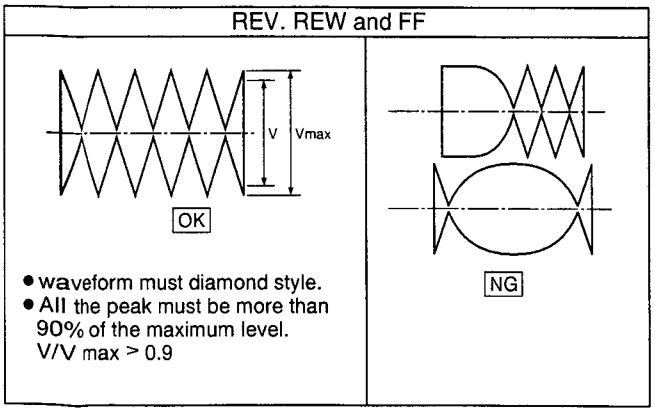


Fig. M-10

4-5-5. Confirmation of Envelope Waveform at the beginning of track

1. Observe the Envelope Waveform signal by oscilloscope and confirm the envelope signal is in the specification in the transition from FF to Play, from REW to Play, from REV to Play and from Loading completion to Play.
2. If it is out of specification, after adjusting the "4-5-6. S4 Tension Post Height Adjustment", confirm this "Envelope Waveform at beginning of track" again.

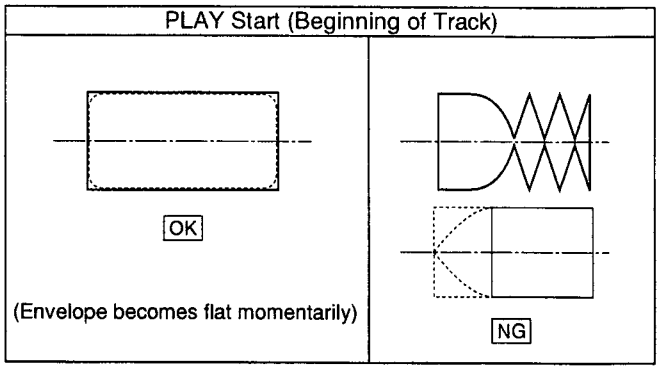


Fig. M-11

4-5-6. S4 Tension Post Height Adjustment

Note :
This adjustment should be done when the "4-5-2. Envelope Waveform Adj.", "4-5-4. Confirmation of Envelope in REV, REW and FF mode" or "4-5-5. Confirmation of Envelope Waveform at the beginning of Track" can not be achieved the specification.

1. Rotate the S4 Tension Post height 90 degrees counterclockwise from lower limit position.
2. Adjust S1 and T1 post height adjustment again. Refer to the "4-5-2. Envelope Waveform Adjustment".
3. Confirm the "Play Start Envelope Waveform". Refer to the "4-5-5. Confirmation of Envelope Waveform at the beginning of Track".
4. If it is not in the specification, repeat item 1 to 3. The maximum rotation angle is 360 degrees.
5. Even the height is still out of specification, confirm the "4-4. T4, S4 and S5 Post Height Pre-Adjustment".

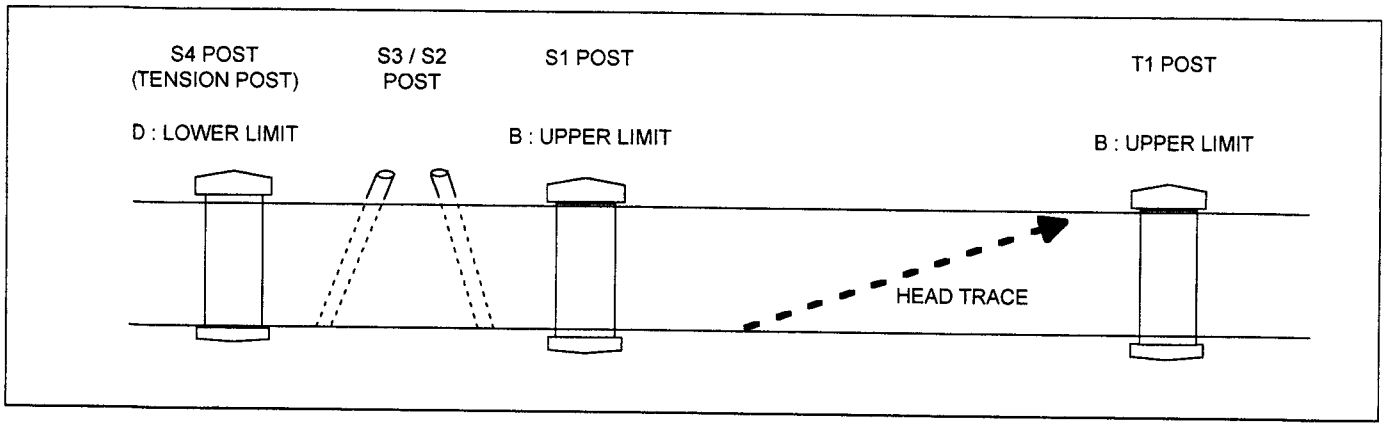


Fig. M-12

4-5-7. REV Tape Pass Limit Adjustment

1. Place unit into REV mode, and adjust T4 Post so that the lower limit touches the tape.
2. Confirm the tape pass limit of each post as shown in Fig. M-8.
3. This adjustment must be done after "4-5-2. Envelope Waveform Adjustment".

4-5-8. Play Tape Pass Limit Confirmation

1. Place the unit into Play mode, and confirm the each post limit is in the specification as shown in Fig. M-8.
2. This adjustment must be done after "4-5-2. Envelope Waveform Adjustment".
3. Regarding T4 Post, confirm and adjust this confirmation alternately with "4-5-9. REV Tape Pass Limit Confirmation".
4. Confirm the tape pass limit for both L and S cassettes.

4-5-9. REV Tape Pass Limit Confirmation

1. Place the unit into REV mode, and confirm the each post limit is in the specification as shown in Fig. M-8.
2. This adjustment must be done after "4-5-2. Envelope Waveform Adjustment".
3. This adjustment should be done alternately with "4-5-8. Play Tape Pass Limit Confirmation".
4. Confirm the tape pass limit for both L and S cassettes.

4-5-10. FF, REW Tape Pass Limit Confirmation

1. Place the unit into FF and REW mode, and confirm the each post limit is in the specification as shown in Fig. M-8.
2. This adjustment must be done after "4-5-2. Envelope Waveform Adjustment".
3. Confirm the tape pass limit for both L and S cassettes.

SECTION 3

BLOCK,SCHEMATIC, CIRCUIT BOARD DIAGRAMS

CONTENTS

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

3-1. ABBREVIATIONS

	INITIAL/LOGO	ABBREVIATIONS
A	A GND	Analogue GND
	A. COMP	Audio Component Signal
	A. D.P [L]	Audio Dubbing Pause Ⓛ
	A. DEF [S]	Audio Defeat
	A. DUB P [L]	Audio Dubbing Pause Ⓛ
	A. ERASE	Audio Erase
	A. HASW	Audio Head Amp Switching Pulse
	A. HSW	Audio Switching Pulse
	A. IN [L]	Audio Input (L)
	A. IN [R]	Audio Input (R)
	A. MUT [H]	Audio Mute Ⓗ
	A. MUTE [H]	Audio Mute Ⓗ
	A. OUT [L]	Audio Output (L)
	A. OUT [R]	Audio Output (R)
	A. RF OUT	Audio RF Signal Output
	A. TR	Auto Tracking
	A0-8, 0-17	Memory Address
	A3V2	AD Converter Reference Voltage
	AB0-4	Address Bus
	AB0-4, AB12-15	Address Bus Line 0-4, 12-15
	ABSF	Focus Encoder Input
	AC. O/EE. H	AC Online/EE Ⓗ
	ACI	Analogue Channel Cording IC
	AD	AD Converter
	AD	Auto Date, Analogue Digital Converter
	AD CLK	AD Clock
	AD REC	Audio Delayed REC
	AD0-6	Address
	AD0-6, ADR0-6	Address Data Line
	ADCLK	Analogue Digital Converter Clock
	ADCNT	Analogue Digital Control
	ADCS	Analogue Digital Chip Select
	A-DET	Audio Detect
	ADREC	Audio Delaied Rec
	ADUB	Audio Dubbing
	AE	Auto Expose
	AECNT	Auto Expose Control
	AEE(H)	Audio E-E (H)
	AEH	Audio Erase Head
	AEIRQ	Auto Expose Interrupt Request
	AF DIS CS	AF DIS Chip Select
	AFC S C	AFC S Curve
	AFC [S]	AFC S Curve
	AFC. DEF	AFC Defeat
	A-FADE(L)	Audio Fade (L)
	AF-AMP	AF HALL Bias
	AFCS	Auto Focus Chip Select
	AFRP	Audio PLL Voltage Control
	AGC	Automatic Gain Control
	AGCCNT	Automatic Gain Control Control
	AGND	Analogue Ground/Audio Ground
	AGS	Anti Ground Shooting
	AH(P) / (R)	Audio Head (Play) / (Record)
	AHASW	Audio Head Amp Switch Pulse
	AHSW	Audio Head Switch Pulse
	AI, AO	Buffer Input, Output
	AIBCK	Bit Clock (to A/D Converter)
	AIDAT	Serial Data (to A/D Converter)
	AILRCK	L/R Clock (to A/D Converter)
	AIMCK	Master Clock (to A/D Converter)
	ALC CNT	Auto Level Control Control
	ALC MAIN	Auto Level Control Drive
	ALE	Address Latch Enable
	A-LOCK	Full Auto Switch
	ANLPTH	Analogue Loop Through High
	AORP	Audio Overlap Pulse
	APCNT	Aperture Control
	APS	Auto Power Save
	ART. V	Artificial Vertical Sync Signal
	ART. V. MM	Artificial Vertical Sync Signal Mono Multi
	ART. V/H/N	Artificial Vertical Sync Signal Ⓗ/Normal
	AT. V/H/N	Artificial Vertical Sync Signal
	ATSW/TEST/NOR/SE	Test/Normal/Service
	AT CNT	Automatic Tracking Gain Adjust
	ATF	Automatic Track Finding
	ATFCLK	41.85MHz Clock
	ATFG	Auto Track Gain
	ATL	Auto Lock Select
	ATN	Absolute Track Number
	ATR OFF(H)	Auto Tracking Off (H)
	ATV	Advanced TV
	AUDIO SELECT [H]	Audio Select Ⓗ
	AVDD	Analogue VDD
	AVSS	Analogue Ground
	AWTB	Auto White Balance B-Y
	AWTR	Auto White Balance R-Y
B	B MODE. H	B Mode Ⓗ
	B.G.P	Burst Gate Pulse
	BACK	Back-up
	BACK UP	Microcomputer Back-up
	BACK VDD	Back-up Power
	BATT	Battery
	BATT ALARM	Battery Alarm
	BATT REF	Reference Voltage for Battery
	BCB	B Carrier Balance
	BCBM(B-Y)	B-Y Carrier Balance
	BCBM(R-Y)	R-Y Carrier Balance
	BD0-7	REC/Play In/Out Buss
	BDCK	Standard Bus Data Clock (9MHz)
	BDEN	Standard Bus Data Enable
	BEND	Data Block End Request
	BF	Burst Flag Pulse
	BFA	Burst Flag Pulse for Encorder
	BFO/BFI	Burst Flug Input/Output
	BI, BO	Buffer Input, Output
	BI/MI [L]	Bilingual/Mix Ⓛ
	BIL	Bilingual
	BIL [L]	Bilingual Ⓛ
	BL	Back Light
	BL ON	Back Light ON (L)
	BL4V	Back Light 4V
	BLC 0, 1	Back Light Y Control Out, In
	BLDI/O	Back Light Drive Input/Output
	BLK	Blanking Pulse
	BLKA	Blanking for Encorder

	INITIAL/LOGO	ABBREVIATIONS
	BLKA	Blanking Pulse for Encorder
	BLKI/O	Blanking Pulse In/Out
	BLKZ	Blanking Pulse for Zoom Encorder
	BM	Balance Modulator
	BQUIET	Bus Out Control Signal
	BS CLOCK	BS Clock
	BS DATA	BS Data
	BS LCH IN	BS L Channel Input
	BS MIX [H]	BS Mix Ⓗ
	BS MONI [H]	BS Monitor Ⓗ
	BS MONI [H]	BS Monitor Ⓗ
	BS RCH IN	BS R Channel Input
	BUF IN/OUT	Buffer In/Out
	B-Y KB	B-Y Carrier Balance
	B-YO	B-Y Signal Out
C	C A In/Out	Pre-Aperture In/Out
	CAPSTP	Capstan Stop Flag
	C CNT	Colour Control
	C SYNC	Composite Sync Signal
	C/N	Carrier/Noise
	C0-7, C00-07	Chrominance Signal 0-7
	CAGAIN	Aperture Gain Control
	CAM TL	Capstan Trque Limit
	CAP EC	Capstan Trque Control
	CAP M GND	Capstan Motor GND
	CAP P(H)	Capstan Power On (H)
	CAP R/F/S	Capstan Reverse (H)/Stop (M)/Forward (L)
	CAP SW	Capstan Power Control Switch
	CAP. ET	Capstan Torque Control
	CAP. FG1	Capstan FG1 Pulse
	CAP. FG2	Capstan FG2 Pulse
	CAPSTP H	Capstan Stop Flag (Stop High)
	CAPVM	Capstan Motor Current
	CAPVS	Capstan Motor Power Control Switch
	CAS. SW	Cassette SW
	CAS	Compresion, Audio Process, Shuffling/Deshuffling
	CAS	Memory Address Strobe (Active Low)
	CASDOWN, DWN	Cassette Down (L)
	CB, CR	Chroma B, Chroma R
	CBLK	Composite Blanking Pulse
	CC	Channel Cording
	CCA	Curent Drive Control
	CCA	Current Control Amp
	CCD	Charge Coupled Devise
	CCW	Counterclockwise
	CD SP0-7	Digital Chroma
	CDS	Correlate Double Sampling Signal
	CDS1, 2	Sampling Pulse for CCD Output Signal
	CE	Chip Enable
	CE	Control Pulse Erase
	CEC	Capstan Error Code
	C-ERA(H)	Control Erase (H)
	CFEM	Chrominance Memory Signal
	CFM	Chrominance Field Memory
	CFM1-4	Chroma Field Memory Signal
	CG CLK	Character Generator Clock
	CG CLK DATA	Clock Generator Data
	CG DATA	Character Generator Data
	CGC	Chrominance Gain Control
	CGCS	Character Generator Chip Select
	CGO	Character Generator Serial Data
	CH	Charge

	INITIAL/LOGO	ABBREVIATIONS
	CH1	Channel 1 (Odd Field)
	CHR	Character
	CHR BACK	Character Back-up
	CHR MIX	Character Mix
	CI, CO	Buffer In/Out
	CI,CO	Buffer Input & Output
	CIF	Control Signal Forward Input
	CIF, CIR	Positive Control Pulse, Negative Control Pulse
	CIR	Control Signal Reverse Input
	CK	Clock
	CKL	Ratch Lock
	CKS	Shift Lock
	CL/CLK	Clock
	CLASS	Classeffication Signal for Compress (DCT/VLC)
	CLASS 0.1	Class Control Signal Durring DCT/VLC
	CLK135	13.5MHz System Clock
	CLK18	18MHz System Clock
	CLK2	Clock 2 (824XFH: 12.875MHz)
	CLK246	24.576MHz Clock
	CLK27	27MHz System Clock
	CLK450	450KHz Clock
	CLKDCLK	Digital Clock
	CLK-PH	Clock Phase Control
	CLK-REF	Reference Clock
	CLP-RST-H	Clamp Reset High Signal
	CLY FG	Cylinder FG Signal
	CMEMO0-3	Chroma Memory Output Signal 0-3
	CMIX	Character Mix
	CMO	Chrominance Memory Output
	COL/B/W/NOR	Colour/Black & White/Normal
	COLOR [H]	Colour Ⓗ
	COMPC	Position Detection Pulse
	COM RDY	Serial Enable Signal
	CNCLK	Clock
	CNR	Chrominance Noise Reduction
	CNT, CONT	Control
	CO	Control Out
	CO0-7	Chrominance Output 0 to 7 (Digital)
	COM	Common
	COM RDY	Serial Transmission Enable
	COMB	Comb Filter
	COS EQ	Cosin Equalizer
	CP	Clamp Pulse
	CP ON(H)	Camera Power On(H)
	CP2, 20	Clamp Pulse
	CP2A, CP2O	Encoder Clamp Pulse
	CPN	Component Signal
	CPOB	Clamp Pulse for Optical Blanking
	CPS	Composite Signal
	CPV	Gate Scan Clock
	CR OUT	Pre Apature Out
	CR POW SW	Camera Remote Power On Switch
	CRA	Aperture Gain Control
	CRA	Pre Apature Gain Control
	CS	Chip Select
	CS 0-7	Chrominance Signal Out 0-7
	CSEL	Clock Phase Select
	CSI 0-7	Chrominance Signal In 0-7
	CTSW	Crosstalk Switch
	CURR	Current
	CURRENT LIM	Current Limmiter
	CW	Clockwise
	CYL ET	Cylinder Motor Trque Control

	INITIAL/LOGO	ABBREVIATIONS
	CYL PG	Cylinder Motor PG
	CYL VM	Cylinder Motor Current or Power
D	D CLK	Digital Clock
	D MODE	Digital Mode Switch Signal
	D. FM REC [H]	Delaied FM Recording Ⓗ
	D. FM REC [L]	Delaied FM Recording Ⓛ
	DA UV SEL	D/A Convertor U/V Select
	DAC	Digital Analogue Converter
	DAG	Digital Analogue Ground
	DB0-7	Data 0-7
	DB0-7	Microprocessor Data
	DCC	DC Clamp Control
	DCCNT	DC Control
	DCI	Digital Channel Cording IC
	DCLR	Digital Clear
	DCP	Digital Clamp Pulse
	DCS-CLK, DA	CAS & DV I/F Serial Clock
	DC-STP1	DCS Serial Start
	DC-STP2	DCS Serial Stop
	DCT	Discrete Cosine Transform (Compression)
	DCX7	Serial Data
	DEDP 0-3	Playback Data
	DEDR 0-3	Rec Data
	DEMO	Demodulation
	DEMP	A/D Convertor Empahsis Control
	DEMP	De-Emphasis
	DFD 0-7	Encode Data In/Out Between Shaffling Memory
	DFD0-7	Encode Input/Output Signal for Shuffling Memory
	DIBDCK	Bit Clock
	DICLK	Digital Clock
	DIDAT	Serial Data
	DIDAT	Serial Data Durring Digital Audio In
	DIF	Digital Interface
	DILRCK	L/R Clock
	DILRCK	Serial Clock Durring Digital Audio In
	DIMCK	Master Clock
	DIMCK	Mater Clock Durring Digital Audio In
	DIO 1-8	Data In/Out
	DIOS	Data In/Out Select Control Signal
	DIOS	Select Signal for Digital In/Out
	DIS	Digital Image Stabilizer
	DIS R/B	Digital Image Stabilizer Read (H)/Busy (L)
	DIS R/B	DIS IC Rady/Busy
	DIS/KAND	Digital Image Stabilizer/Sensitivity
	DISCS	Dis Chip Select
	DISP	Display
	DL	Delay Line
	DOBCK	Audio A/D Convertor Bit Clock
	DOCTL	Data Output Control Signal
	DODAT	Serial Data (to D/A Converter)
	DOLRCK	Audio A/D Converter LR Clock
	DOLRCK	L/R Clock (to D/A Converter)
	DOMCK	Audio A/D Converter Master Clock
	DOMCK	Master Clock (to D/A Converter)
	DQ 1-16	Memory Data
	DRAM CAS	D-RAM Colum Address Strobe
	DRAM OE	D-RAM Out Enable
	DRAM RAS	D-RAM Read Address Strobe
	DREC	AV Delayed REC Start Pulse
	DRK	Dark (LPF Switch for Auto Focus)
	DS1, 2	Double Sampling Pulse
	DSF 0-7	Data In/Out for Shaffling Memory

	INITIAL/LOGO	ABBREVIATIONS
	DSF 0-7	Input/Output Data to Shuffling Memory (18MHz)
	DSP	Digital Signal Processor
	DSP R/B	DSP IC Rady/Busy
	DSP-48K-H	DSP IC Clock Select
	DSTB	Data Stobe Signal
	DSV	Digital Sum Variation
	DV	Digital Video
	DVB	Digital Video Broadcast
	DVC	Digital Video Cassette
	DVDD	Digital VDD
	DVIO	Digital Video Input Output
	DVSS	Digital GND
E	E2 CS or E2P CS	EEPROM Chip Select
	E2 R/B	EEPROM Rady/Busy
	E2P	EEPROM
	EARP	Earphone
	EC	Torque Control
	ECC	Error Correction Cording
	ECM	Electric Condencer Mic
	ECR	Reference Voltage for Capstan Torque
	EDA	Error Correction, DCI, ATF Servo
	EDT TRIG [L]	Edit Trigger Ⓛ
	EDIT [H]	Edit Ⓗ
	EE [H]	EE Ⓗ
	EE CS	EEPROM Chip Select
	EE R/B	EEPROM Read (H)/Busy (L)
	EEPROM	Electric Erasable Programable Read Only Memory
	EIS	Electric Image Stabilizer (DIS)
	EMP	A/D Convertor Emphasis Control
	ENAB	Enable
	ENV	Enverope
	EOB	End of Block
	EP [H]	LP Ⓗ
	EP/LP [H]	LP Ⓗ
	EP/LP/SP	LP/SP
	EP/SS [H]	LP/Slow/Still/Stop Ⓗ
	EPROMCS	EPROM Chip Select
	EQ	Equalizer
	EXT S DATA	Serial Data for Edit
	EXT SCK	Serial Clock for Edit
F	FACT MODE	Factry Mode (not used in the service)
	FB	Feed Back
	FC	Saw Tooth Signal In
	FCK	Clock
	FCO	Saw Tooth Signal Generator
	FEND	Frame End Pulse
	FF/REW [L]	First Forward/Rewind Ⓛ
	FG1 IN	FG1 Pulse Input
	FG2 IN	FG2 Pulse Input
	FH2B	FH/2 (15.625KHz / 2=7.8125KHz)
	FIX OSD	Auto Tracking Off (H)
	FLICK	Flicker Output
	FLY ERASE [H]	Flying Erase Head On Ⓗ
	FM	Field Memory
	FM MUT [H]	FM Audio Mute Ⓗ
	FM MUTE [H]	FM Audio Mute Ⓗ
	FM0-7	Field Memory 0-7
	FMCO0-3	Field Memory Chrominance Out 0-4
	FMDIR	Focus Motor Direction
	FMOEM	Field Memory Enable
	FMOEO	Field Memory Enable

	INITIAL/LOGO	ABBREVIATIONS
	FMT1-4	Focus Motor Terminal 1-4
	FMY00-07	Field Memory Luminance Out 0-7
	FMYI0-07	Field Memory Luminance In 0-7
	FNO	F Value
	FPS	Frame Refference Signal
	FR	Capstan Reverse High
	FRP	Frame Refference Pulse
	FRPSO	Frame Start Pulse
	FUL. E [H]	Full Erase Head On Ⓗ
	FULL. E [H]	Full Erase Head On Ⓗ
G	G1, G2, G3	Gap 1, 2 and 3
	GCA	Gain Control AMP
	GCNT	Gain Control
	G-CNT	AGC Adjustment
	GCTRL	Gain Control
	GENE	Generator
	GF	FG AMP Terminal
	GSW	Ground for Switching Power
H	H/M/N	Hi-Fi / Mix / Normal
	H/N	Hi-Fi / Normal
	H. SYNC	Horizontal Sync
	HAP	Horizontal Aperture
	HASW	Head AMP Switching Pulse
	HB	Hall Bias
	HBR SET	High Brightness Set
	HBRST	High Brightness Set
	HCLR	High Clear
	HCP	Shift Clock for Horizontal Drive
	HD	Horizontal Drive Pulse
	HDTV	High Definition TV
	HEX	Hexadecimal
	HG	Hall Gain
	HID	Head Switching Pulse
	HLT	High Bright Signal
	HALL IN(+), (–)	Input Signal from Hall IC
	HP	Headphone
	HPF	High Pass Filter
	HSE	Modulated Data Output
	HSP	Timing Pulse for Shaffling Memory
	HSS	Horizontal Sync Signal
	HSW	Head Switching Pulse
I	I/F	Interface
	I-2 C	Inter Integrated Circuit
	ID(H)	Wide Television (H)
	IMP	Inter Microprocessor Protocol
	IN SELA1	Input Select A1 Position
	IN SELA2	Input Select A2 Position
	IN SELA3	Input Select A3 Position
	INS L/R [L]	Insert Lch/Rch Ⓛ
	INS. [H]	Insert Ⓗ
	INTER	Interval Recording
	INV	Inverter
	IOU	R-Y Analogue Signal Output
	IOV	B-Y Analogue Signal Output
	IOY	Y Analogue Signal Output
	IR	Infrared Rays
	IRDET	Imfrared Ray Detection
	IREF	Current Adjustment Terminal
	IRIS/SH	Iris / Shutter Control
	IRQ	Interrupt Request

	INITIAL/LOGO	ABBREVIATIONS
	ITI	Insert & Track Information
J	JPEG	Joint Photographic Image Cording Experts Group
K	KANDO	Digital Gain Up
	KB	Carrier Balance
	KEY IN	Key Scan
	KND	Digital Gain Up
	KNEE	Luminance Compensate
L	LD	Load Pulse
	LEDCNT	LED Control
	LI-BATT	Lithium Battery
	LOAD	Loading
	LOAD F, R	Loading Direction (F: Forward / R: Reverse)
	LPF	Low Pass Filter
	LRMONO	Monoral Audio (L + R)
	LSB	Least Significant Bit
	LVL	LPF Switch for Auto Focus
M	M GND	Motor GND
	M1-3	Motor Coil Terminal 1 to 3
	MA0-5	Microprocessor Address Data 0-5
	Mbps	Megahertz Bit Per Second
	MD	Modulation
	MD0-7	Microprocessor Data 0-7
	MDT0-7	Microprocessor Data 0-7
	ME (TAPE)	Metal Evaporated (Tape)
	MES [H]	Mesecam Ⓗ
	MESE [H]	Mesecam Ⓗ
	MESE [L]	Mesecam Ⓛ
	METER 5V	Level Meter 5V
	METER [L]	Level Meter (L)
	METER [R]	Level Meter (R)
	METER. L/AVS	Level Meter (L)
	METER. R/AVS	Level Meter (R)
	MHSYNC	Monitor Horizontal Sync Signal
	MI/BI [L]	MIX Ⓗ/Biligual
	MIC	Memory In Cassette
	MIG	Meta In Gap
	MIX N.R.D.	Non Rec Data Mix
	MOD	Modulation
	MODE SEL	Audio Mode Select
	MODE SW	Audio Mode SW
	MONO [H]	Monaural Ⓗ
	MOUT	Mic Out
	MP (TAPE)	Metal Particle (Tape)
	MSB	Most Signal Bit
N	N/P	NTSC/PAL
	NB1-3	Base for NPN Transistor
	NC	No Connection
	NC1-3	Corrector of NPN Transistor
	NCLR	Power On Reset
	NCP1	Clamp Pulse
	NDE	Non Liner De-Emphasis
	NE	Emitor of NPN Transistor
	NLE	Non Liner Emphasis
	NR	Noise Reduction
	NRD	Non Rec Data
	NRD BLK	Non Rec Data Blanking
	NRD CLK	No Rec Data Clock
	NRE	Read Enable Input (Low Active)

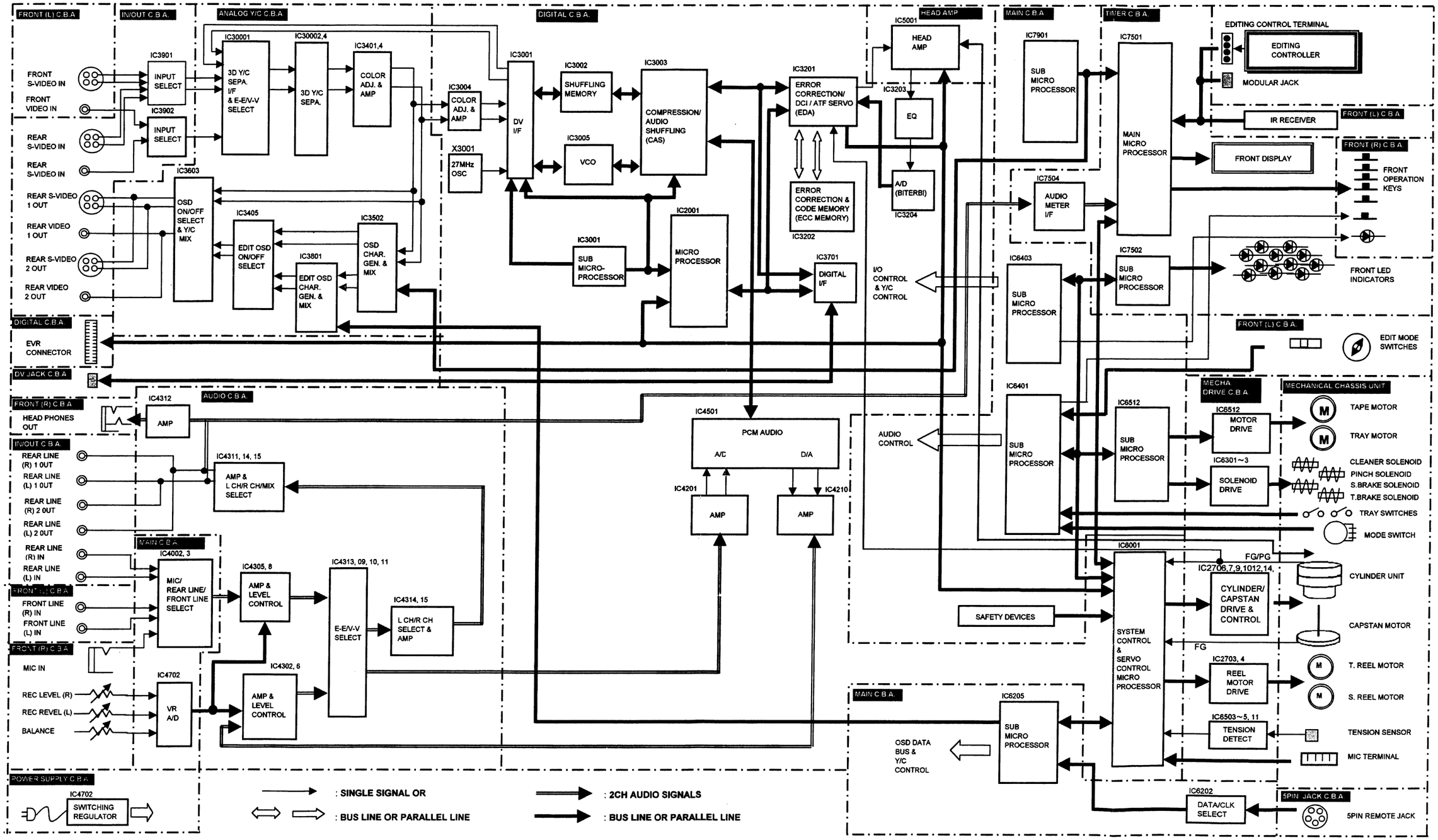
	INITIAL/LOGO	ABBREVIATIONS
	NWE	Write Enable (Low Active)
O	OB	Optical Black
	OBCNT	Optical Black Control
	OBREF	Reference Voltage for Optical Black Control
	OCH	Control AGC Circuit
	OE	Output Enable
	OFH	Horizontal Counted Down Clock Signal (Reference)
	OFS	Offset
	OP	Operation AMP Output
	OSD	ON Screen Display
	OVL	Overlap Pulse
P	P. FAIL	Power Failure Detect
	P. OFF [H]	Power Off Ⓗ
	P. OFF [L]	Power Off Ⓛ
	P SW	Power Switch
	PB1-3	PNP Base 1-3
	PBCTL	Play Back Control
	PBCTL	Pre-Branking Control
	PBH	Head Amp Switch
	PBLK	Pre-Blanking (Pulse)
	PC1-3	Corrector of PNP Transistor
	PCBM	Carrier Balance
	PCH	Phase Compensator (Hall AMP)
	PCI	Phase Compensator (Current)
	PCO	Phase Compensator Out
	PCS	Switching Power Control
	PCV	Phase Compensator (Voltage)
	PE	Emitter of PNP Transistor
	PED	Pedestal
	PEDECNT	Pedestal Control
	PENO	Alarm (L)
	PFP	Pilot Frame Position
	PGA, B	Power Ground A, B
	PGC	Pulse Generator Comparator
	PGI	Pulse Generator Input
	PGMM	Pulse Generator Monostable Multivibrator
	PGO	Output of Pulse Generator AMP
	PMODE	Select Signal for Normal / Wide Screen
	PON	Power On
	POR	Power On Reset
	POSCOM	Common Position
	PREAMP	Pre-AMP
	PREBLK	Pre-Blanking
	PT	Protect for V Voltage
	PWM	Pulse Width Modulation
	PWMB	Pulse Width Modulation Pulse
	PWRFAIL	Power Failure Detect
Q	Q2H	Source Output Select
R	R CTL P	Recorded Control Pulse (+)
	R CTL R	Recorded Control Pulse (–)
	R/B	Read/Busy
	R/L	Direction Control for Data Transmition
	R/S/F	Reverse Ⓗ/Stop Ⓜ/Forward Ⓛ
	RA	Recording AMP
	RA1	Rec AMP 1
	RAC AC	Rec Audio Current
	RAD	Read Address Data
	RAE	Read Address Enable
	RB	Read Busy

	INITIAL/LOGO	ABBREVIATIONS
	R-B	R Bias
	RCB	R Carrier Balance
	RE	Read Enable
	RE(F), (S)	Rotary Erase Head Transformer
	REB	R Bias
	REC CC	Rec Current Control
	REC CCNT	Rec Current Control
	RECCTRL	Recording Control Pulse
	RECI	Rec Amp Switch
	RENCF	Lens Control (Forward)
	RENCR	Lens Control (Reverse)
	RERASE	Rotary Erase Head
	RF. CHROMA	RF Chrominance Signal
	RGBIV1-2	1V Inverted Signal 1-2
	RGO R/G OFF	Offset Voltage for AWT R
	RSF	Capstan Direction (Reverse / Stop / Forward)
	RST	Reset
	RSTB	R Strobe
	RSTPWD	Reset Power Down Input
	RSTR	Reset Read
	RSTW	Reset Write
	RT	Saw Tooth Terminal
	RVCO	Resister for Oscillation
	RW	Read Write
	RWAE	Read Write Enable
S	S IN	Serial Data Input
	S OUT	Serial Data Output
	S-PHOTO	Supply Photo Transistor
	S-RL. PLS	Supply Reel Pulse
	S. CLK	Serial Clock
	S. CLK/AV	Serial Clock/AV
	S. DATA	Serial Data
	S. TAB [L]	Safety Tab SW ON Ⓛ
	S/H	Sampling Hold
	S/PIN	SECAM/PAL/NTSC
	S/S	Start/Stop
	SBD	Serial Data
	SBI	Serial Data Input
	SBO	Serial Data Output
	SBT	Serial Clock
	SC IN	Serial Clock Input
	SC OUT	Serial Clock Output
	SCAN0-5	Key Scan 0-5
	SCK	Serial Clock
	SCK SELECT	Serial Clock Select
	SCR	Search
	SCR, S.C.R.	Still Cue Review
	SEG.	Segment
	SET	White Balance Set
	SH/IRIS	Shutter/Iris Control
	SHIFT	Capasitor for Phase Shift
	SI	Serial Data Input
	SIC	Shift In Clock Input
	SIF	Sound Intermediate Frequency
	SIOC	Serial In/Out Control
	SMCE	Shaffling Memory Chip Enable
	SMRS	Shaffling Memory Read Strobe
	SMWE	Shaffling Memory Write Enable
	SMWS	Shaffling Memory Read Strobe
	SNAP	Snap Shot
	SNS LED	Sensor LED
	SO	Serial Data Output

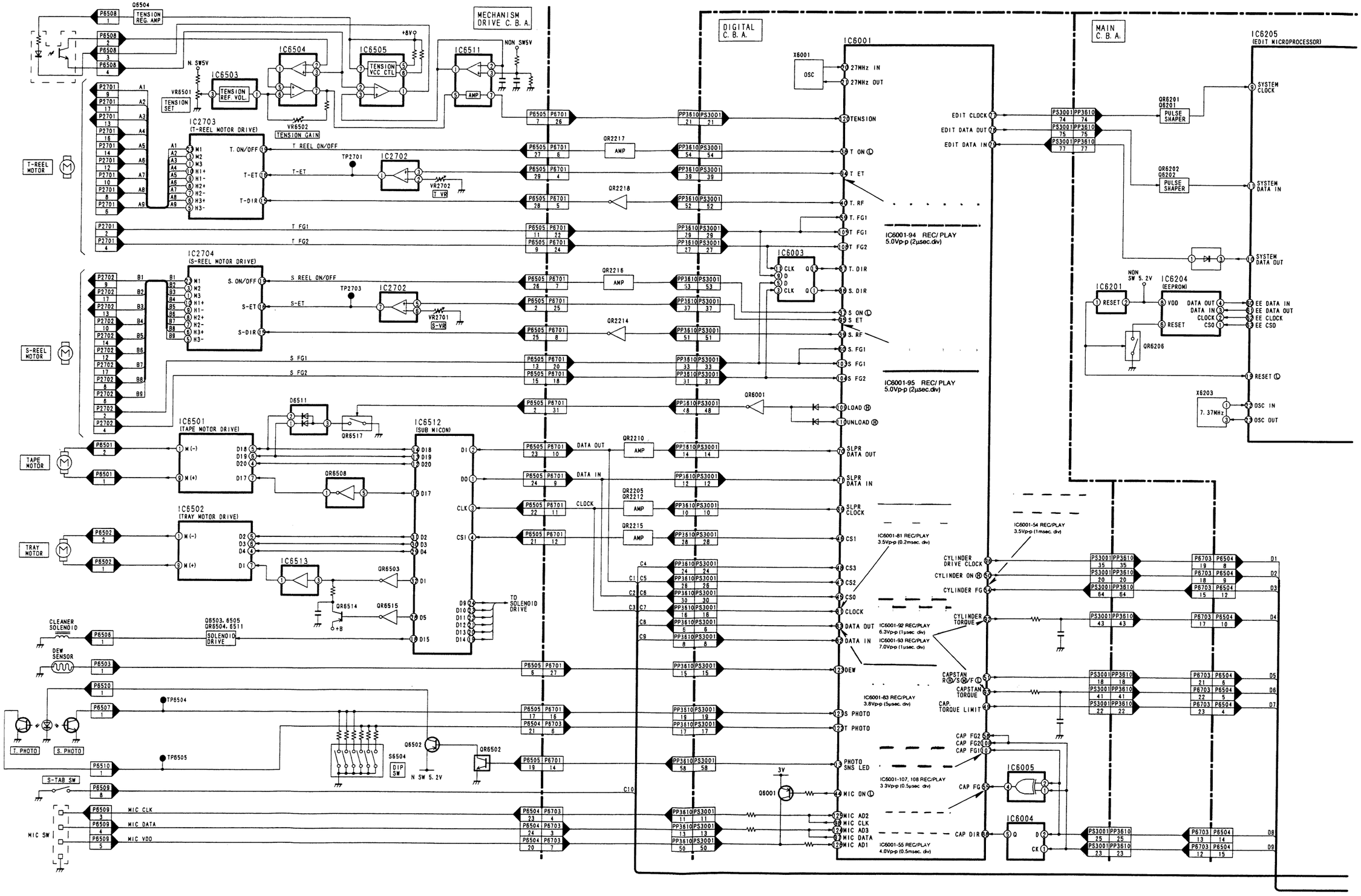
	INITIAL/LOGO	ABBREVIATIONS
	SPA	ATF Smapling Pulse
	SPEN	8 Bit Shift Register Enable
	SPK	Speaker
	SPO	Reset for Switcing Power
	SPST	8 Bit Shift Register Strobe
	SREELP	Supply Reel Pulse
	SRT	Start
	SSA	Start Sync block Area
	SSS [L]	Slow/Still/Stop
	SSW	Select Signal for Low Pass Filter
	ST5V	Safety Tab 5V
	STAB	Safety Tab Switch
	STB	Stand by Signal
	STB	Strobe
	SWB	Switching Pre-Drive Pulse
	SYL EC	Cylinder Torque Control
	SYL FG	Cylinder FG
T	T-PHOTO	Take-Up Photo Transistor
	T-RL. PLS	Take-Up Reel Pulse
	T. BUSCLK	Timer Bus Clock
	T. BUSLSN	Timer Bus Listen
	T. BUSTLK	Timer Bus Talk
	TBC	Time Base Conntrol
	TFT	Thim Film Transistor
	TH	Thermostat for Battery
	TI	Test Mode Select
	TL	Torque Limit
	TM	Sub Code
	TMD	Sub Code Data
	TRE	Tracking Error Signal
	TREEL(P)	Take-up Reel (Pulse)
	TRFIX	Tracking Fix
	TRIWAVE	Tracking Wave
	TRP	Tracking Position
	TRP	Trap
	TSR	Head Switching Refference
	TST	Time Scale Transfer
	TU. AUDIO	Tuner Audio
	TU. GND	Tuner GND
	TU. V. IN	Tuner Video Signal Input
	TU. VIDEO	Tuner Video
U	U/V SEL	R-Y/B-Y Select Signal
	UNLOAD	Un-Loading
	UNRE	Microprocessor Read Enable
	UNWE	Microprocessor Write Enable
	UV	R-Y/B-Y
	UV SEL	R-Y/B-Y Select Signal
V	V. REF	Reference Voltage
	V. EE [H]	Video EE Ⓗ
	V. EE [L]	VIdeo EE Ⓛ
	VCO REF	Reference Oscillater
	V1-V4	V. CCD Drive Pulse
	VB	VH Filter Switching
	VCE	Power Terminal
	VCNTL	Video Control
	VCO	Voltage Control Oscillator
	VCP	Shift Clock Output for Vertical Drive
	VCTLD	Video Control
	VCTRL	Voltage Charge Control
	VD	Vertical Drive Pulse

	INITIAL/LOGO	ABBREVIATIONS
	VDDX	X Drive Power for Colour LCD
	VDDXY	XY Drive Power for Colour LCD
	VDDY	Y Drive Power for Colour LCD
	VDREC	Video Delayed Rec
	Vgg	Voltage for Gate IC
	Vgl	Gate off Voltage
	VID	Video Signal Out
	VIN	Video In
	VITC	Vertical Interval Time Code
	VITERBI	One of Signal Detection Method
	VL	Low Voltage
	VLC	Variable Length Cording
	VLOCKP	Artificial Sync Pulse
	VLP	Artificial Sync Pulse
	VM	Motor Voltage
	VMD	Velocity Mode Data
	VMD1-3	Electric Shutter Mode
	VMODE	NTSC/PAL Select Switch
	VMVH	VH Filter Switching
	VORP	Video Overlap
	VRB	Voltage Refference Bottom
	VRBS	Voltage Refference Bottom Output
	VREFH	Refference Voltage High Side
	VREFL	Refference Voltage Low Side
	VRI	Refference Voltage Input
	VRO	Refference Voltage Output
	VRT	Voltage Refference Top
	VRTS	Voltage Refference Top Output
	VS	Switching Comparator
	VSS	Vertical Sync Signal
W	W/N	Mode Select for Window Mode
	W/N	Wide / Normal
	WAD	Write Address Enable
	WAE	Write Address Enable
	WAERAE	Write Address Enable
	WARI	Interrupt
	WB	White Balance
	WE	Write Enable
	WEM	Memory Write Enable
	WSB	B AGC Control
	WSR	R AGC Control
	WTV	Wide TV
X	X IN	Oscillator Input
	X OUT	Oscillator Output
	XP	FG Logic Reset
Y	Y FM0-7	Y Field Memory 0-7
	YCE	Cylinder Error Code
	YGC	Y Gain Control
	YMO 0-7	Y Field Memory 0-7
	YNCST	Noize Canceller
	YNR	Luminance Noise Reduction
	YSDP 0-7	Digital Y Out 0-7

3-2. OVERALL BLOCK DIAGRAM

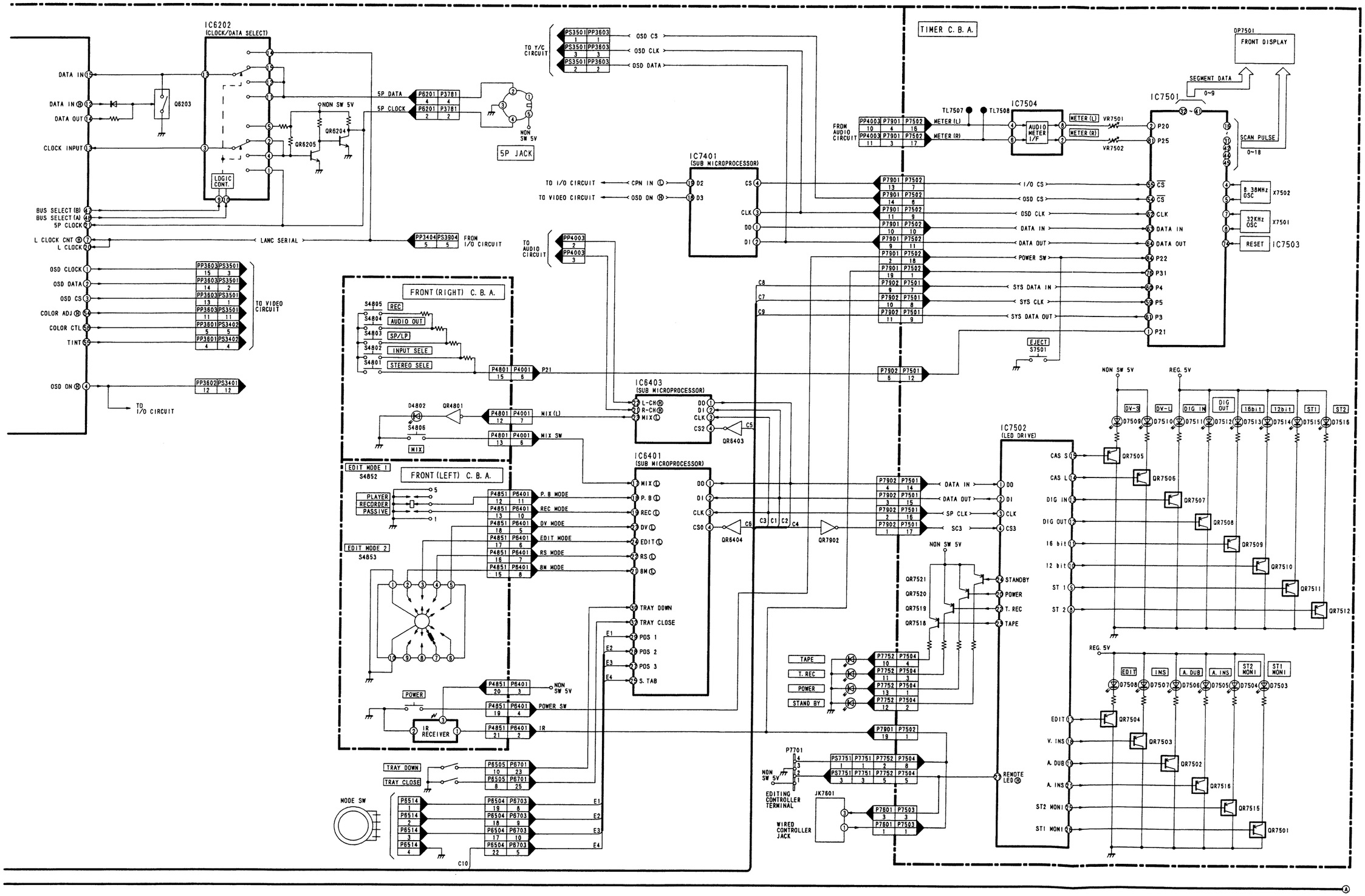


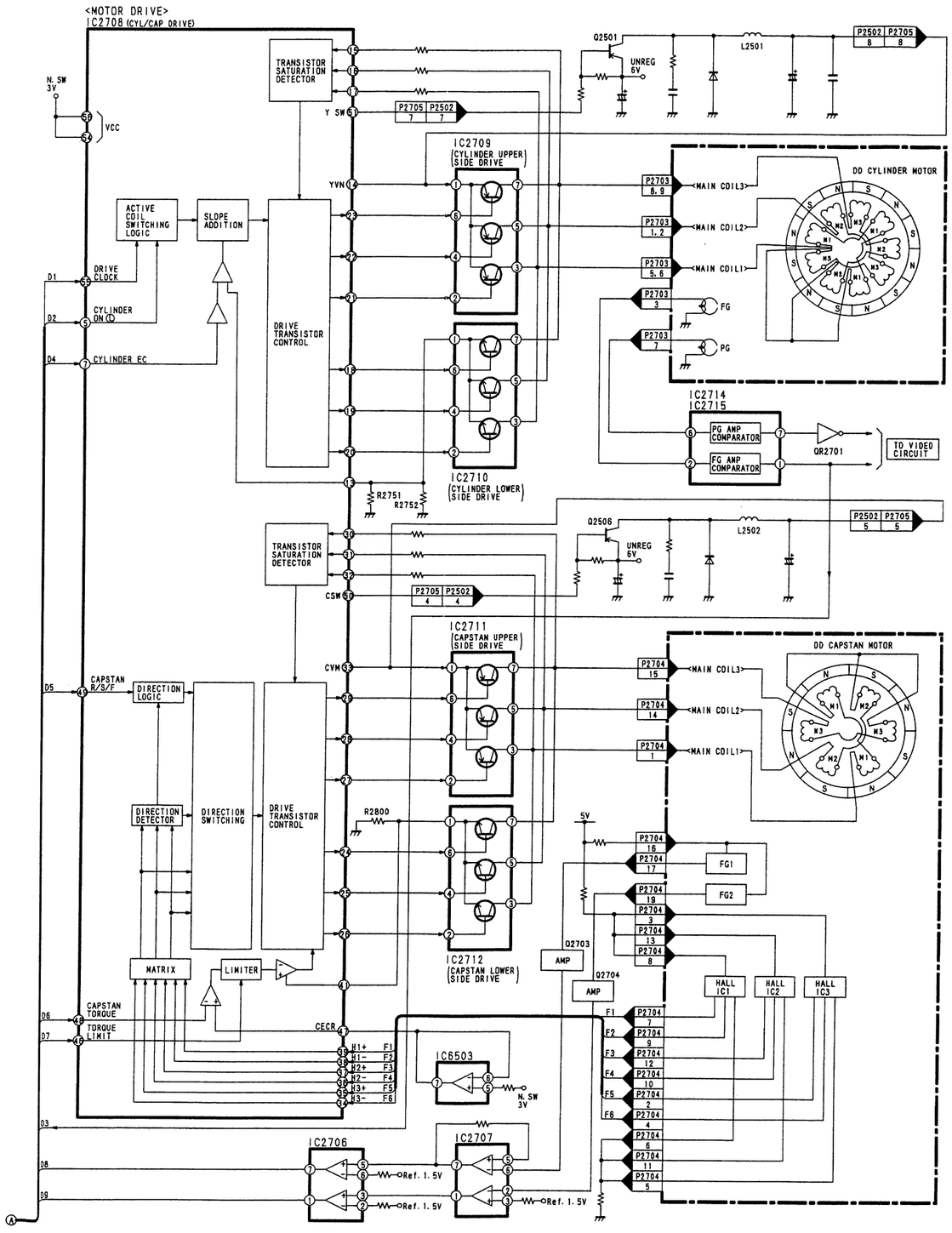
3-3. SYSTEM CONTROL & SERVO BLOCK DIAGRAM



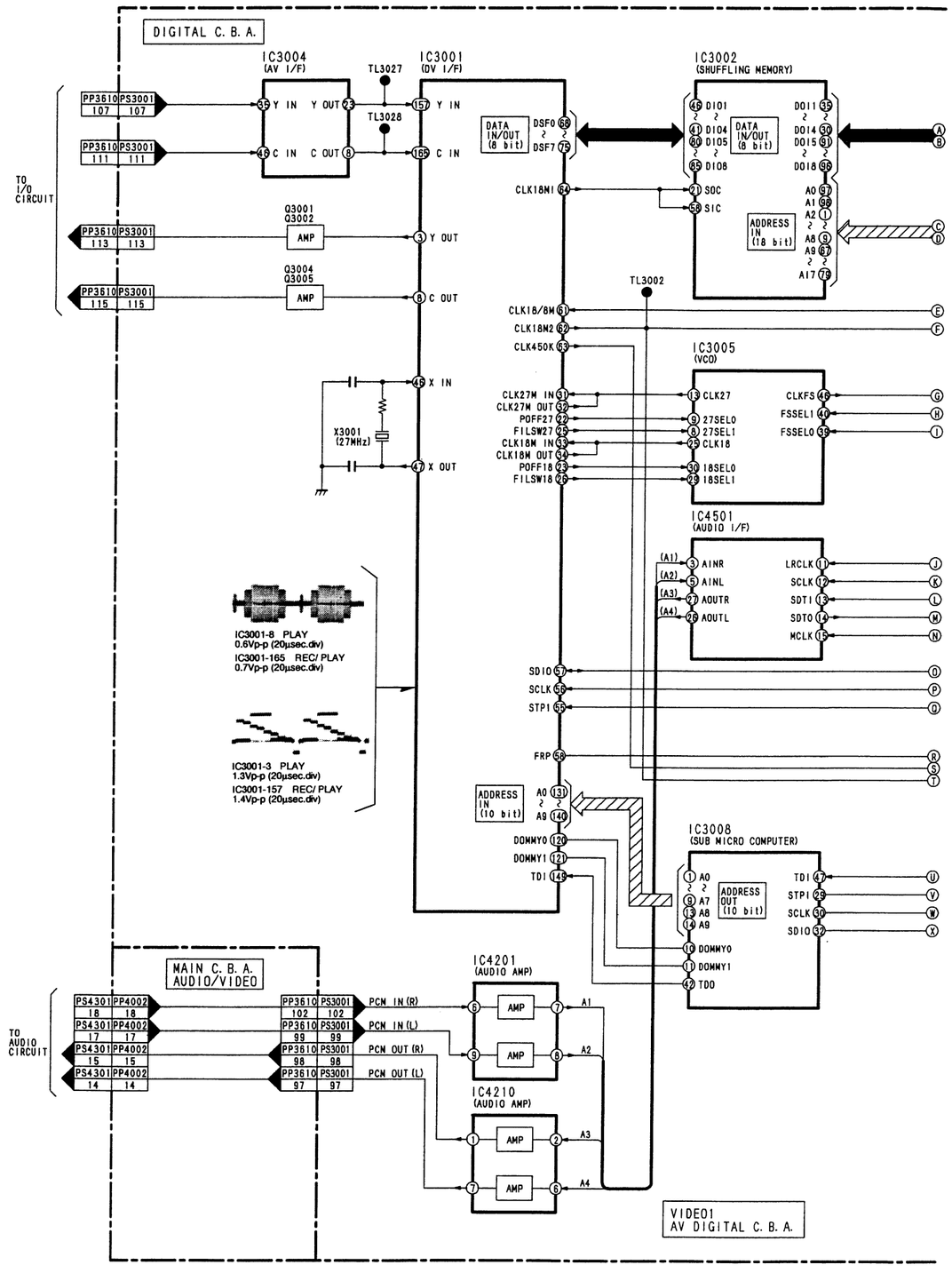
3—9

3—10


IC6202
(CLOCK/DATA SELECT)
DATA IN
DATA IN
DATA OUT
CLOCK INPUT
Q6203
LOGIC CONT.
NON SW 5V
QR6204
QR6205
5P DATA
5P CLOCK
NON SW 5V
5P JACK
BUS SELECT (B)
BUS SELECT (A)
5P CLOCK
L CLOCK CNT
L CLOCK
LANC SERIAL
FROM I/O CIRCUIT
OSD CLOCK
OSD DATA
OSD CS
COLOR ADJ
COLOR CTL
TINT
TO VIDEO CIRCUIT
OSD ON
TO I/O CIRCUIT
TO Y/C CIRCUIT
OSD CS
OSD CLK
OSD DATA
TO AUDIO CIRCUIT
IC7401
(SUB MICROPROCESSOR)
TO I/O CIRCUIT
CPN IN
TO VIDEO CIRCUIT
OSD ON
FRONT (RIGHT) C. B. A.
S4805 REC
S4804 AUDIO OUT
S4803 SP/LP
S4802 INPUT SELE
S4801 STEREO SELE
P21
D4802
QR4801
S4806
MIX
MIX (L)
MIX SW
IC6403
(SUB MICROPROCESSOR)
L-CH
R-CH
MIX
QR6403
C5
EDIT MODE 1
S4852
FRONT (LEFT) C. B. A.
PLAYER
RECORDER
PASSIVE
EDIT MODE 2
S4853
P. B MODE
REC MODE
DV MODE
EDIT MODE
RS MODE
8M MODE
IC6401
(SUB MICROPROCESSOR)
MIX
P. B
REC
DV
EDIT
RS
8M
TRAY DOWN
TRAY CLOSE
PDS 1
PDS 2
PDS 3
S. TAB
QR6404
C6
C3
C1
C2
C4
QR7902
POWER
IR RECEIVER
NON SW 5V
POWER SW
IR
TRAY DOWN
TRAY CLOSE
MODE SW
E1
E2
E3
E4
C10
TIMER C. B. A.
FROM AUDIO CIRCUIT
METER (L)
METER (R)
TL7507
TL7508
IC7504
AUDIO METER I/F
VR7501
VR7502
IC7501
DP7501
FRONT DISPLAY
SEGMENT DATA
0~9
SCAN PULSE
0~18
8.38MHz OSC
X7502
32KHz OSC
X7501
RESET
IC7503
I/O CS
OSD CS
OSD CLK
DATA IN
DATA OUT
POWER SW
SYS DATA IN
SYS CLK
SYS DATA OUT
EJECT
S7501
C8
C7
C9
IC7502
(LED DRIVE)
DATA IN
DATA OUT
SP CLK
SC3
STANDBY
POWER
T. REC
TAPE
NON SW 5V
QR7521
QR7520
QR7519
QR7518
TAPE
T. REC
POWER
STAND BY
P7701
EDITING CONTROLLER TERMINAL
JK7601
WIRED CONTROLLER JACK
REMOTE LED
REG. 5V
DV-S
DV-L
DIG IN
DIG OUT
16bit
12bit
ST1
ST2
D7509
D7510
D7511
D7512
D7513
D7514
D7515
D7516
CAS S
CAS L
DIG IN
DIG OUT
16 bit
12 bit
ST 1
ST 2
QR7505
QR7506
QR7507
QR7508
QR7509
QR7510
QR7511
QR7512
REG. 5V
EDIT
INS.
A. DUB
A. INS
ST2 MONI
ST1 MONI
D7508
D7507
D7506
D7505
D7504
D7503
EDIT
V. INS
A. DUB
A. INS
ST2 MONI
ST1 MONI
QR7504
QR7503
QR7502
QR7516
QR7515
QR7501



3-4. VIDEO BLOCK DIAGRAM



IC3201-59 REC
5.0Vp-p (10μsec.div)

IC3201-131 REC/PLAY
3.0Vp-p (1msec.div)

IC3201-132 REC/PLAY
3.4Vp-p (2msec.div)

:MAIN SIGNAL PATH IN REC MODE

:MAIN SIGNAL PATH IN PLAYBACK MODE

IC3003 (CAS)
(Compression/Audio/Shuffling)

DATA IN/OUT (8 bit) (4bit)
DFD0 ~ DFD7
BD0 ~ BD3
ADDRESS OUT (18 bit)
SMADD0 ~ SMADD17
SHM225
CLK18
TL3014
VCO0
VCO1
FS1
FS0
LRCLK
SCLK
SDTI
SDTO
MCLK
SDIO
LRFRP
FRP
SCLK
TDO
STP2

IC3201 (EDA)
(Error correction/DCI/ATF servo)

HSE (REC DATA)
SYNC NL
VIT ON
REC CLK
REF CLK
P. B CLK (41.85M)
P. B DATA
ATFI
DATA IN/OUT (4 bit)
BD0 ~ BD3
ADDRESS IN (16 bit)
AD0I0 ~ AD0I15
REC CTL
PBH
REC1
HID3
HID2
P. B DATA IN (7 bit)
HID1
TSR
SPA
DATA IN/OUT (16 bit)
CLK450
CLK18
ADDRESS DATA (9 bit)
LCAS
UCAS
OE
ADDAT0 ~ ADDAT6
DO0 ~ DO15
A0 ~ A8

IC3202
(ECC MEMORY)

ADDRESS DATA (9 bit)
OE
UCAS
LCAS
DATA IN/OUT (16 bit)
D01 ~ D016

IC3203 (AC1)

41.85M (REC)
41.85M/72
PRE EQ
L.P.F.
FILTER
VCO
LATCH
HD
AMP
BPF
CLK
Q3202
Q3204
Q3203

IC3205

TO EVR
PS3002 26
PS3002 24

IC3204
(VITERBI A/D)

A/D
D01 ~ D7

TL3202
TL3201

HEAD AMP C. B. A.

IC5001
(HR AMP)

HSE
AGC OUT (P. B DATA)
HID1
HID2
HID3
REC1
PBH
REC CTL
ATF OUT
RA1 OUT
RA2 OUT
PB H1
PB H2
HA2 IN
HA1 IN
MON2 IN
MON1 IN

FP3201 FP5002
12 12
9 9
3 3
4 4
5 5
1 1
2 2
6 6
11 11

(C7) (C5) (C3) (C1)
(C8) (C6) (C4) (C2)
Q5005
Q5002
Q5006
Q5003
FP5001 5
FP5001 4
FP5001 6
FP5001 7
CH1
CH2

VIDEO2
AV DIGITAL C. B. A.

IC3701
(DIGITAL I/F)

CLK18
DBA0 ~ DBA3
DATA IN/OUT (4 bit)
ADO ~ AD15
ADDRESS DATA (16 bit)
FRP
TPB-
TPB+
TPA-
TPA+

TO DV TERMINAL
P3701 P7651
5 2
4 3
3 5
2 6
1 6

IC2001
(LSI)

STP2
STP1
SCLK
DCS DO
DCS D1
AD/DI0 ~ AD/DI15
CPU WUPI-1
CPU ACKI-1
CPU WUPI-2
CPU ACKO-2
CPU DATA OUT
CPU DATA IN
CPU CLOCK
CPU RDY/CIS
TSR
MID
SPA
FRP
COM CLK
COM DATA OUT
COM DATA IN

IC6001
(SYSTEM CONTROL)

CPU WUPI-1
CPU ACKO-1
CPU WUPO-2
CPU ACKI-2
CPU DATA IN
CPU DATA OUT
CPU CLOCK
CPU RDY
FRP
SPA
MID
TSR

IC2005
(PC I/F)

FRP
COM CLK
COM DATA IN
COM DATA OUT
VCO
UART I
UART O
X2
X1
X2002 (14.748MHz)
OSC

IC2002
(PC I/F)

R OUT
D IN
R IN
D OUT

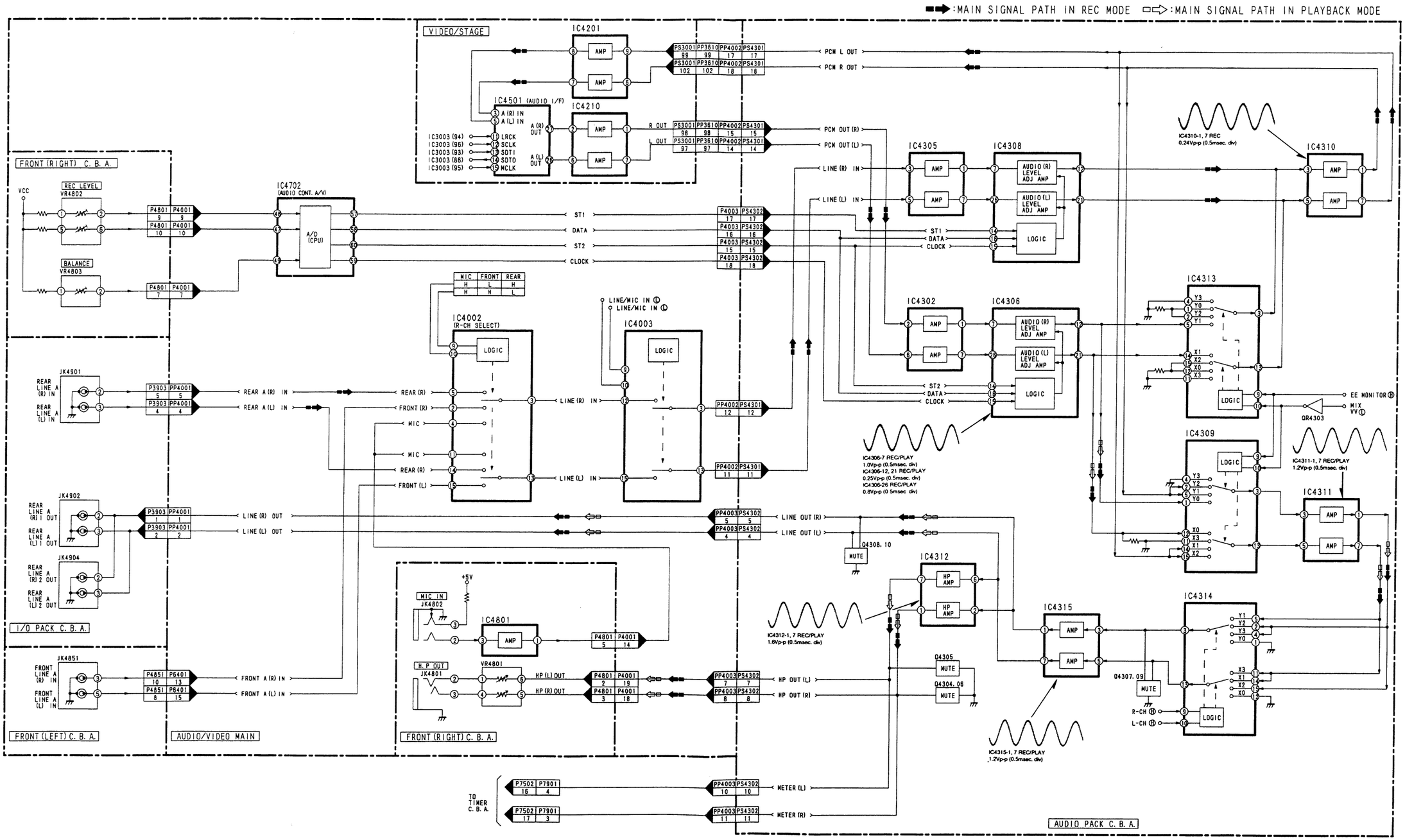
PS3001 PP3610 PP3401 PS3901 PP3901 PS0601
90 90 11 11 9 9
89 89 12 12 8 8

JK0603
232C JACK

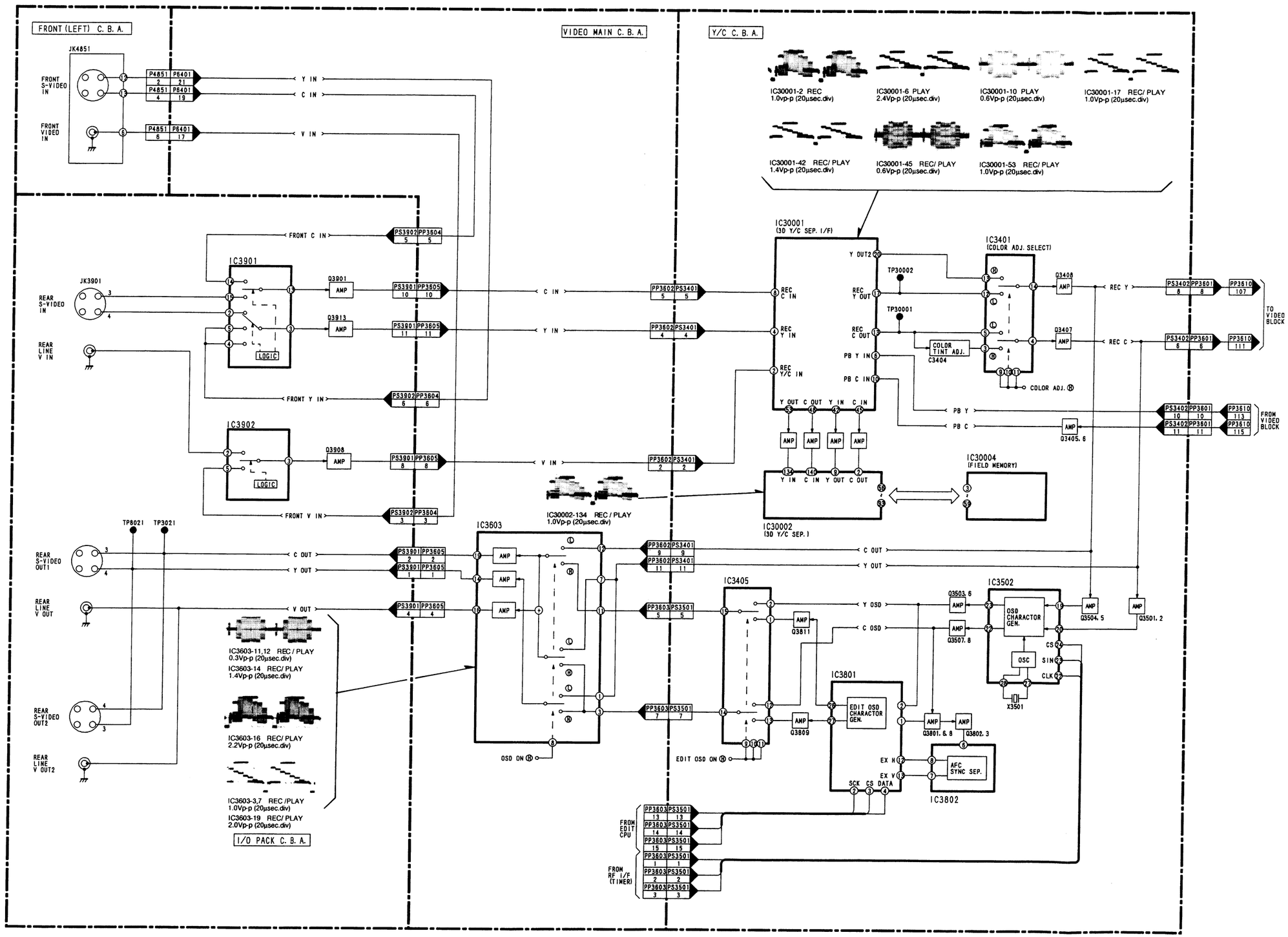
PS3002 34
PS3002 32
TO EVR

LSI/SYSTEM CONTROL&SERVO
AV DIGITAL C. B. A.

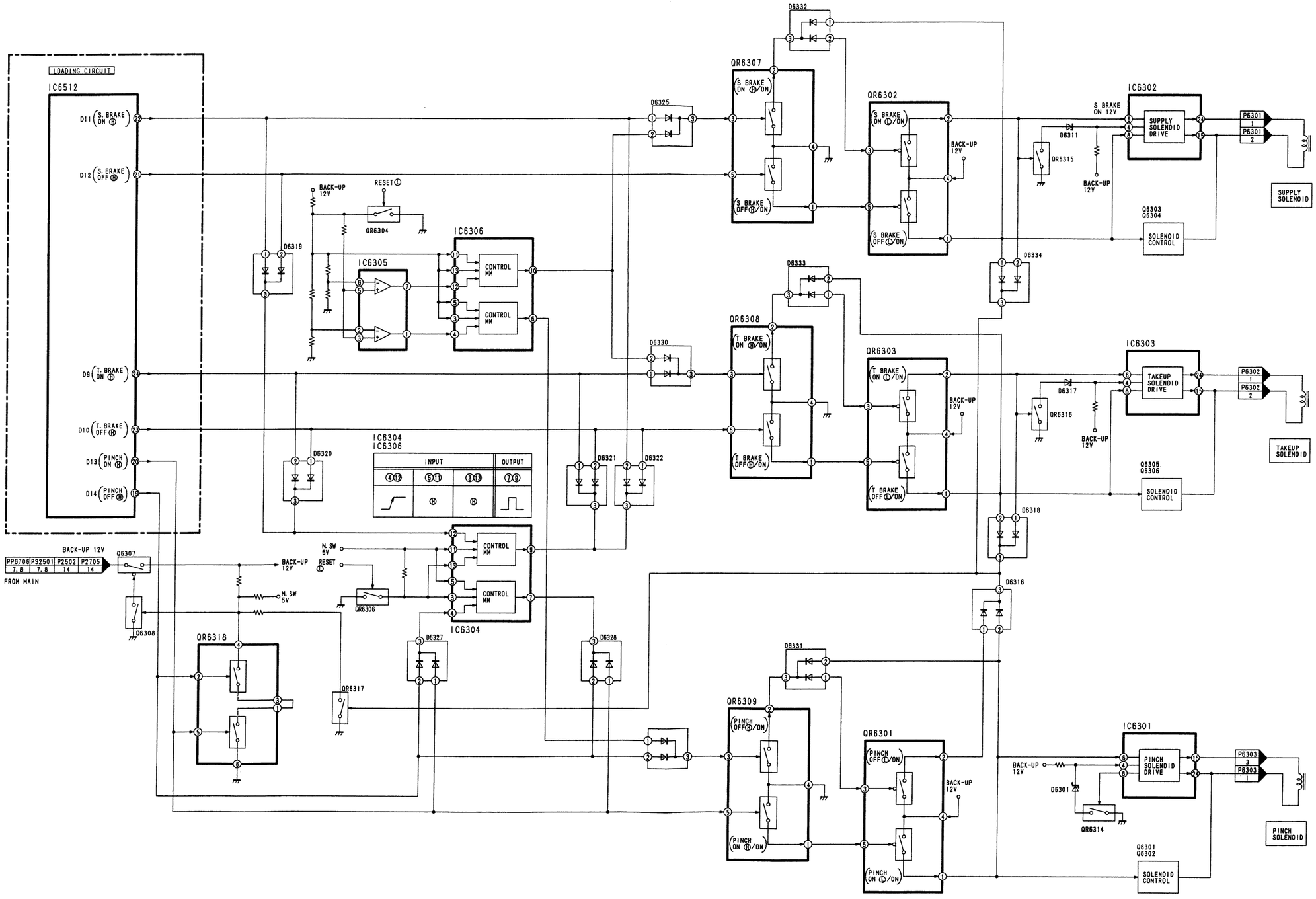
3-5. AUDIO BLOCK DIAGRAM



3-6. INPUT / OUTPUT BLOCK DIAGRAM



3-7. SOLENOID BLOCK DIAGRAM



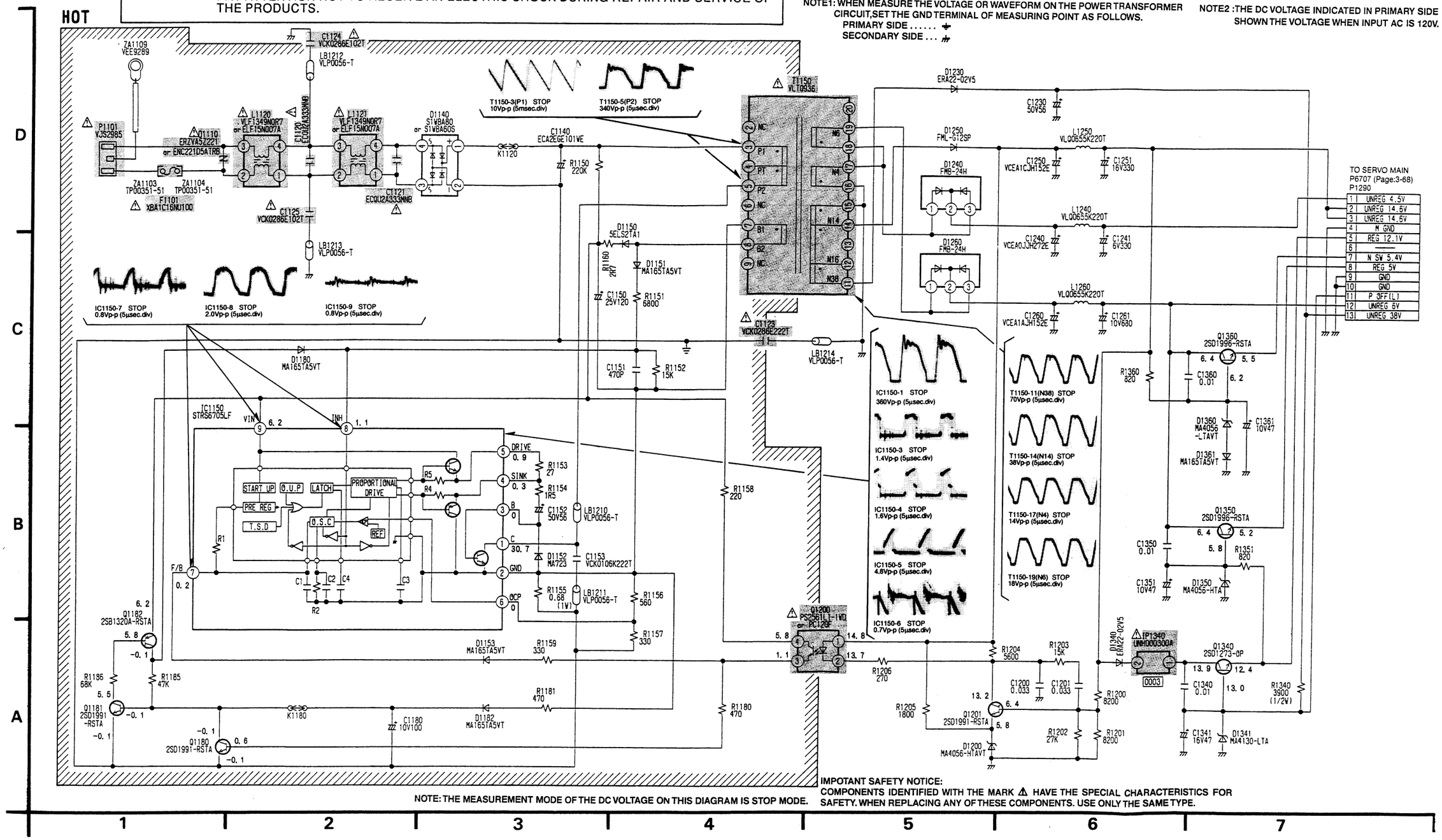
3-8. POWER SUPPLY SCHEMATIC DIAGRAM

CAUTION THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

NOTE1: WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT,SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE ..... ⏚
SECONDARY SIDE ... ⏚

NOTE2 :THE DC VOLTAGE INDICATED IN PRIMARY SIDE SHOWN THE VOLTAGE WHEN INPUT AC IS 120V.

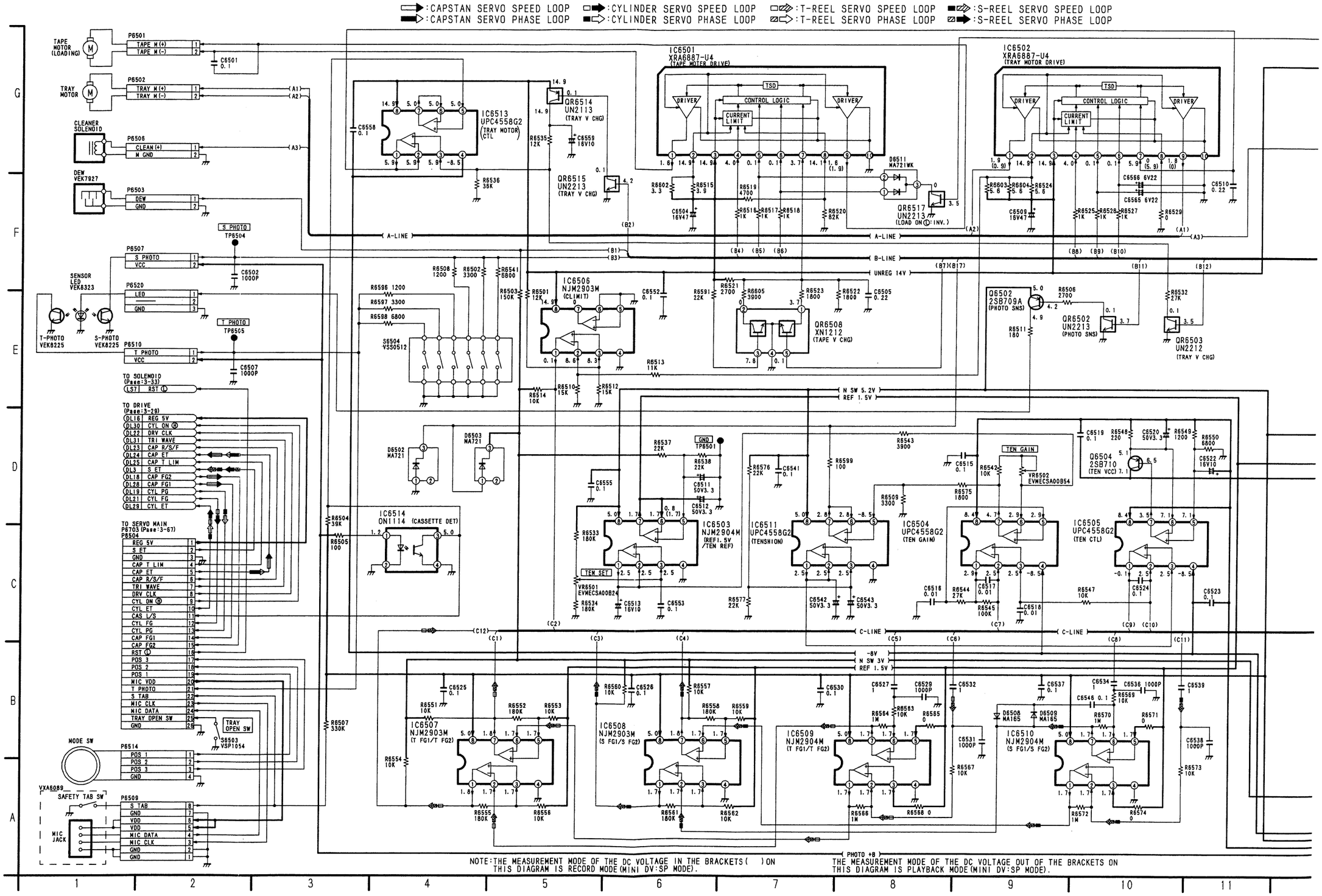
HOT



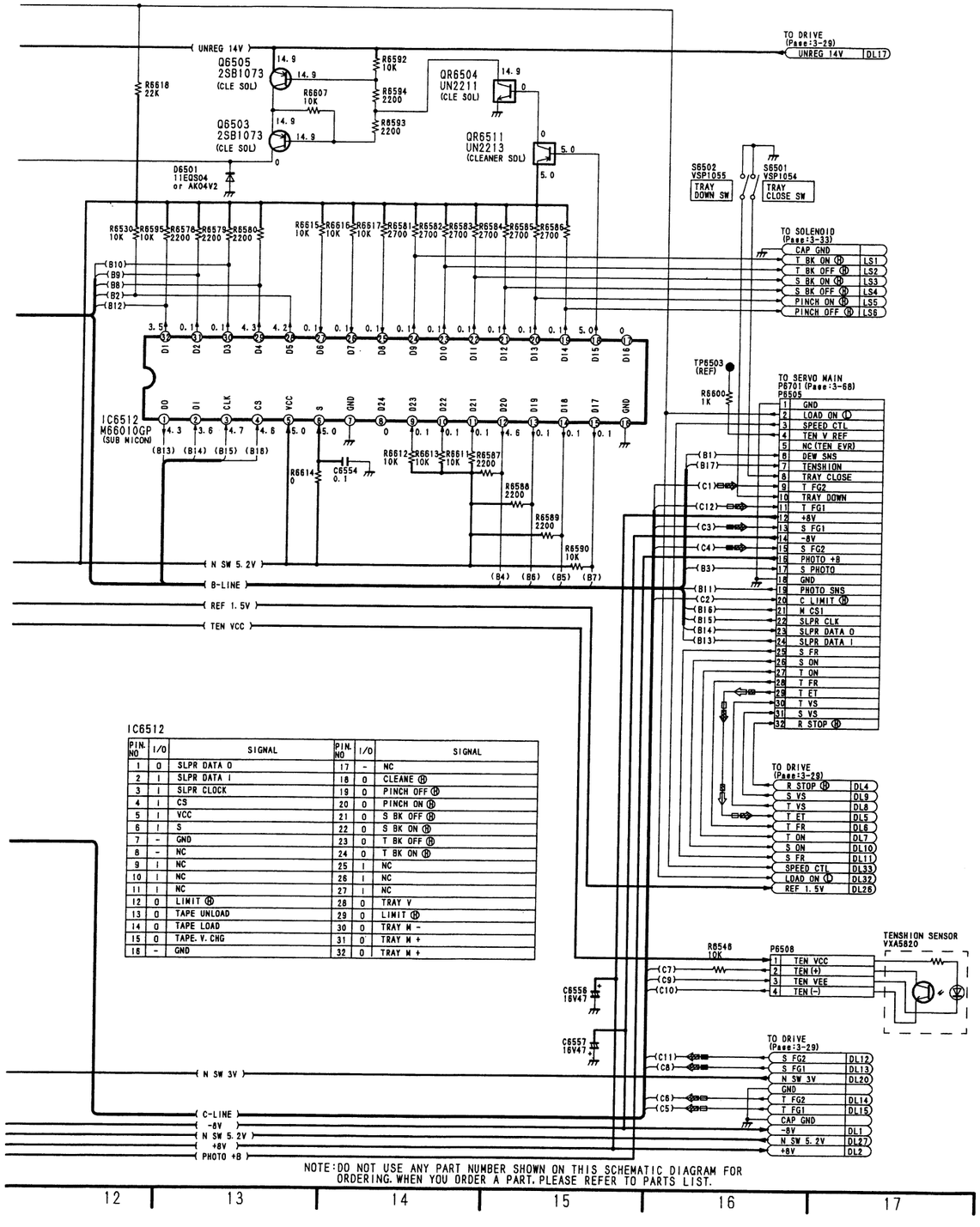
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

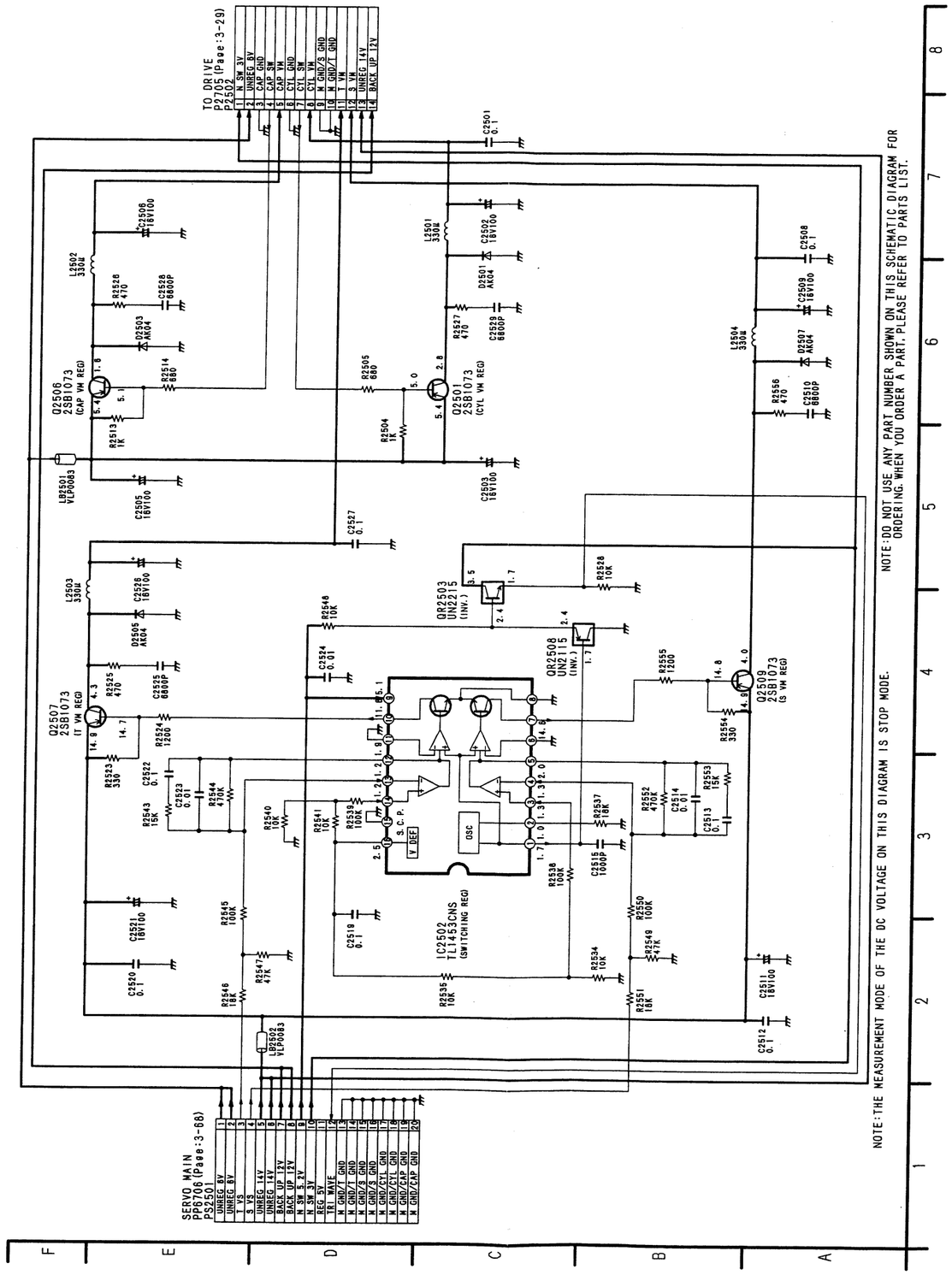
IMPOTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SAME TYPE.

3-9. LOADING SECTION IN MECHANISM DRIVE SCHEMATIC DIAGRAM

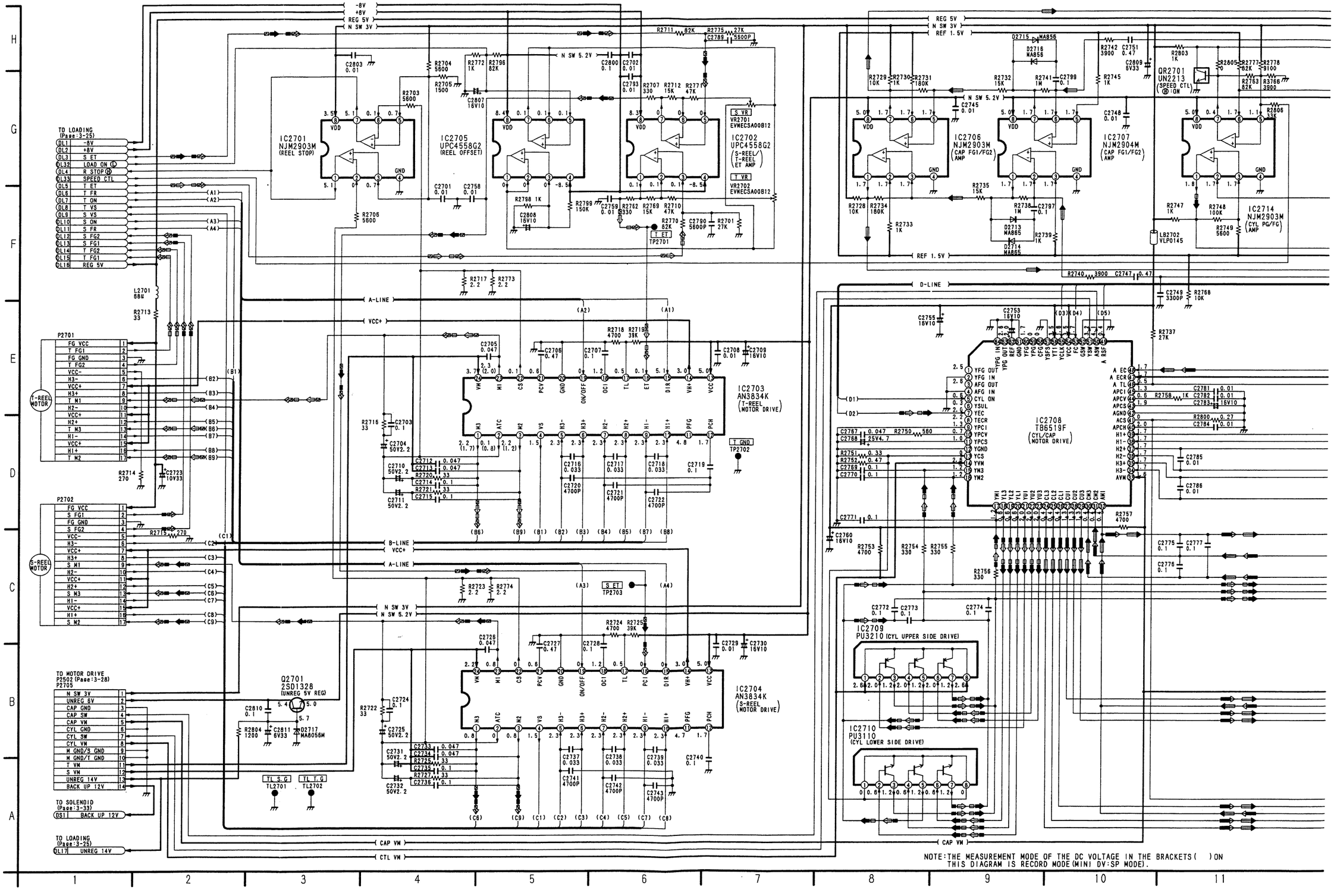


3-10. MOTOR DRIVE SCHEMATIC DIAGRAM

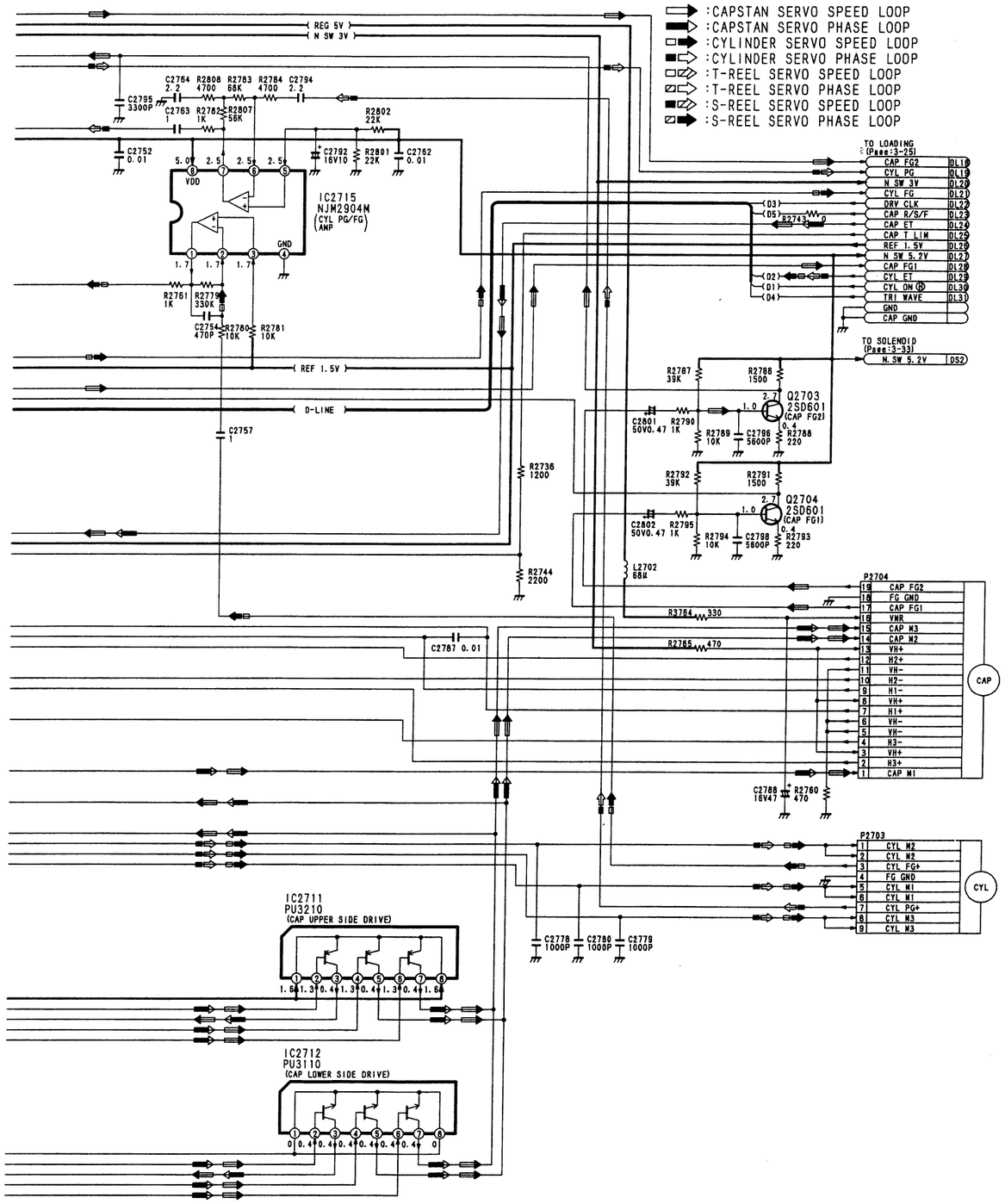




3-11. DRIVE SECTION IN MECHANISM DRIVE SCHEMATIC DIAGRAM



NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( ) ON THIS DIAGRAM IS RECORD MODE(MINI DV:SP MODE).

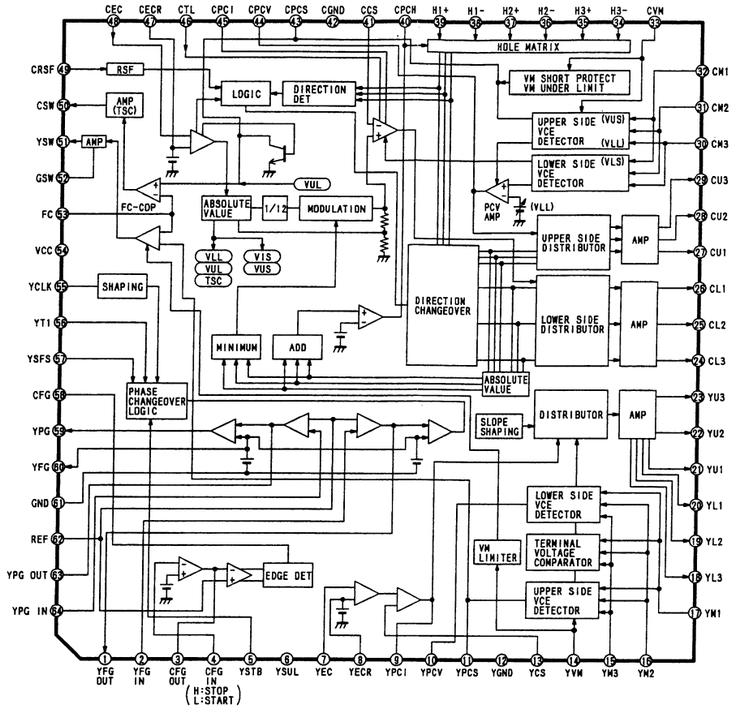


THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE(MINI DV:SP MODE).

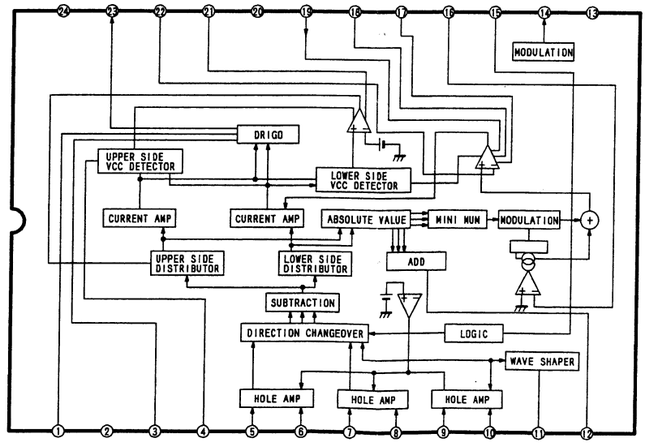
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

12 13 14 15 16 17

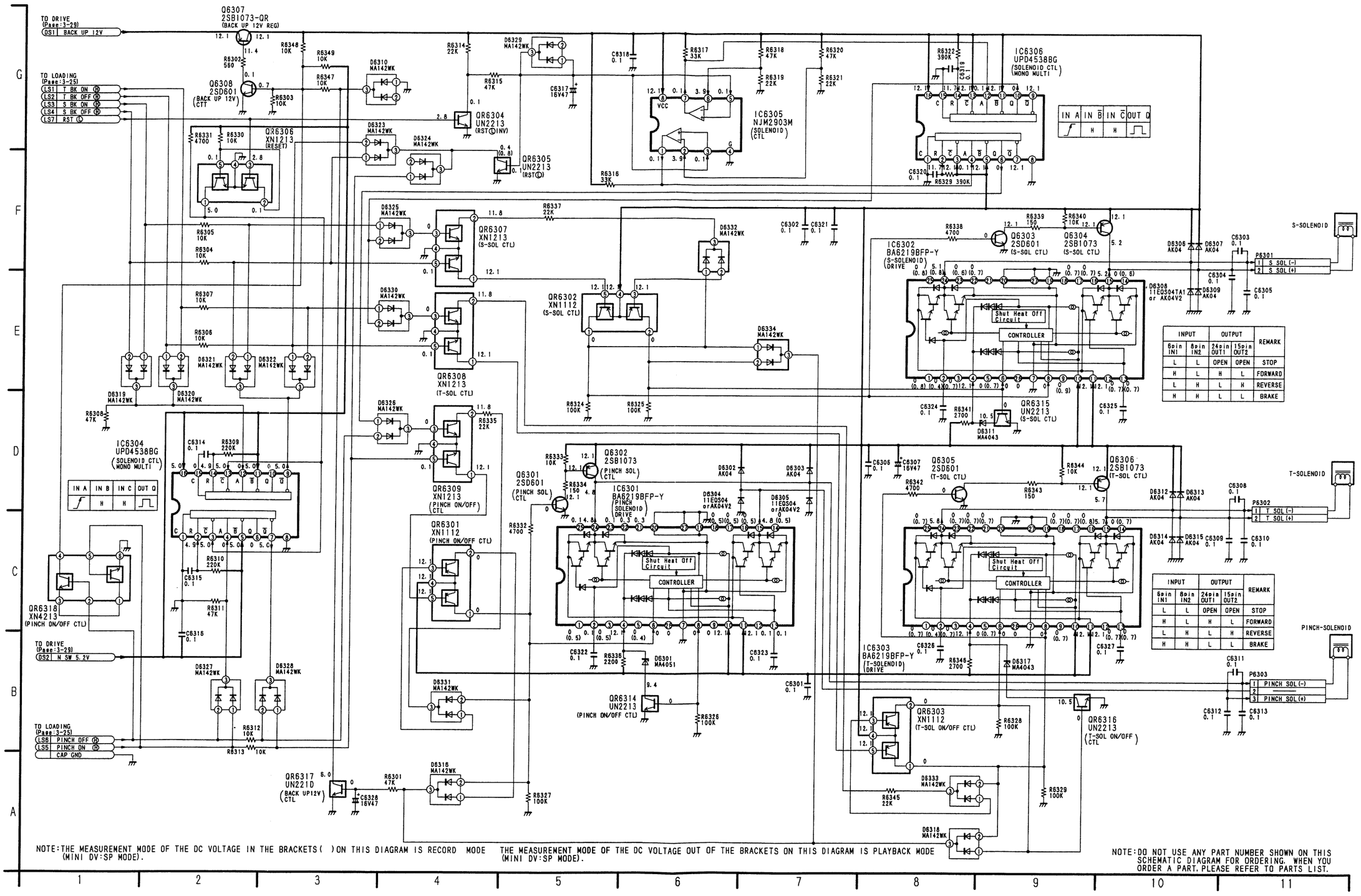
IC2708



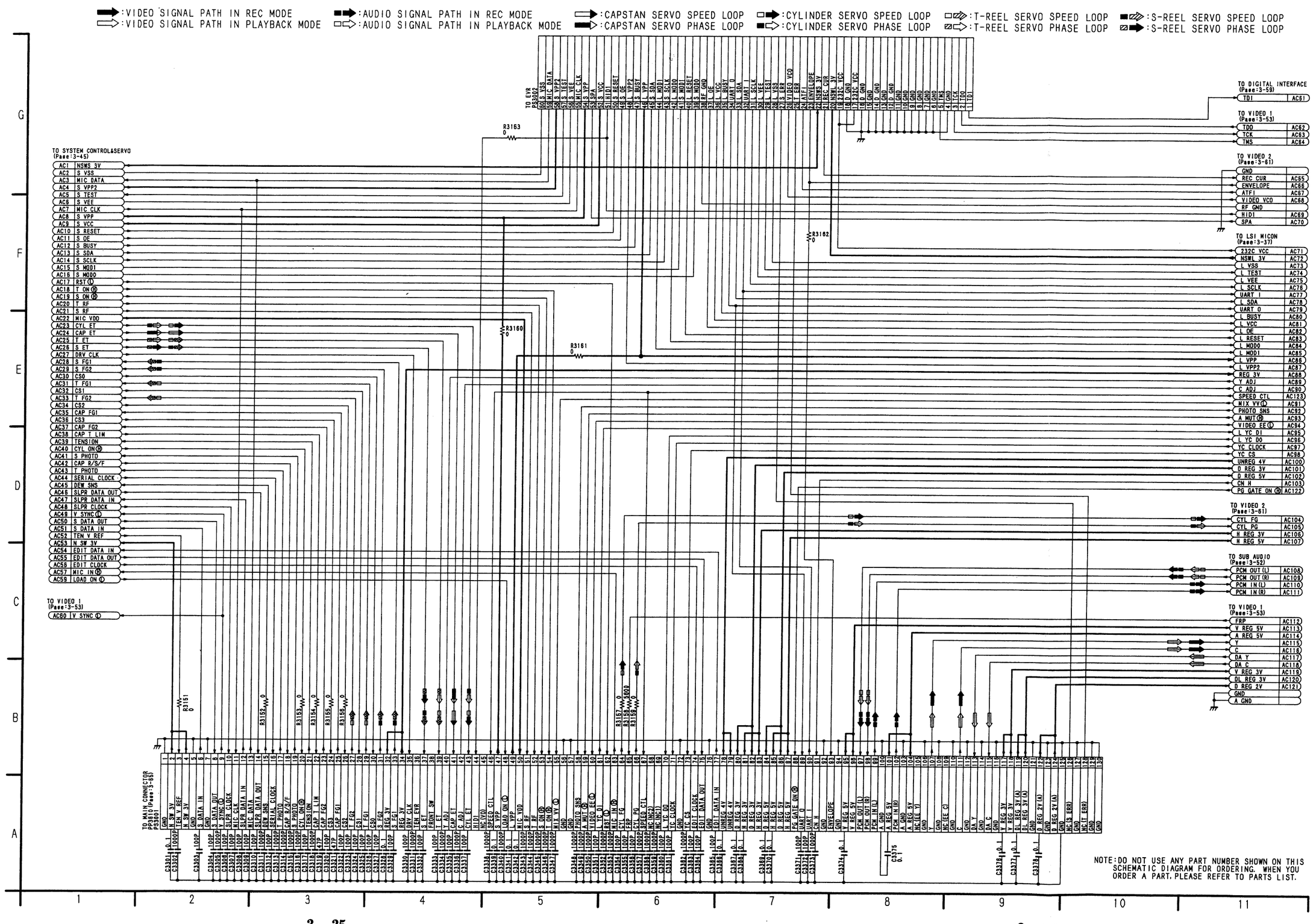
IC2703
IC2704



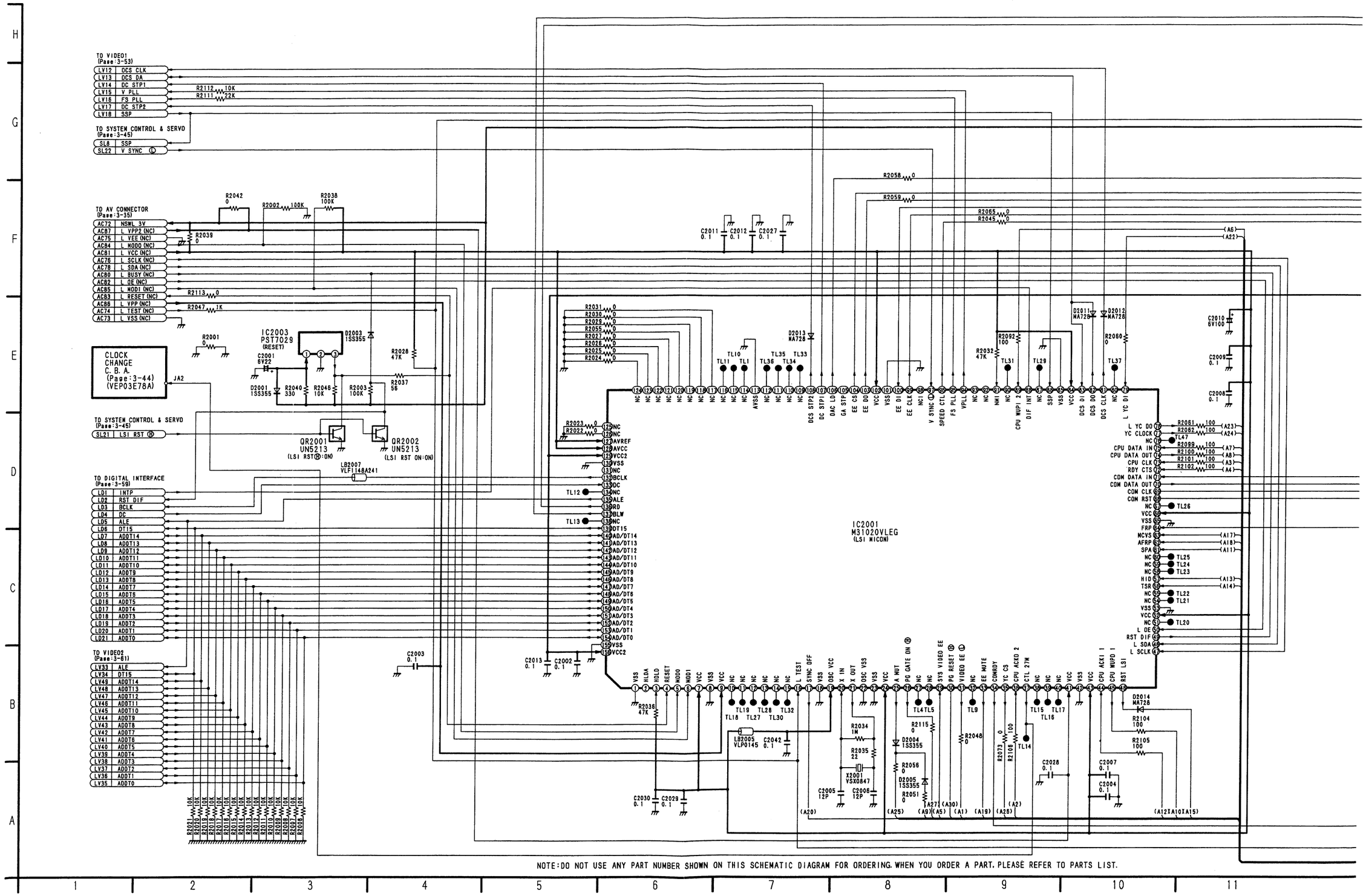
3-12. SOLENOID SECTION IN MECHANISM DRIVE SCHEMATIC DIAGRAM

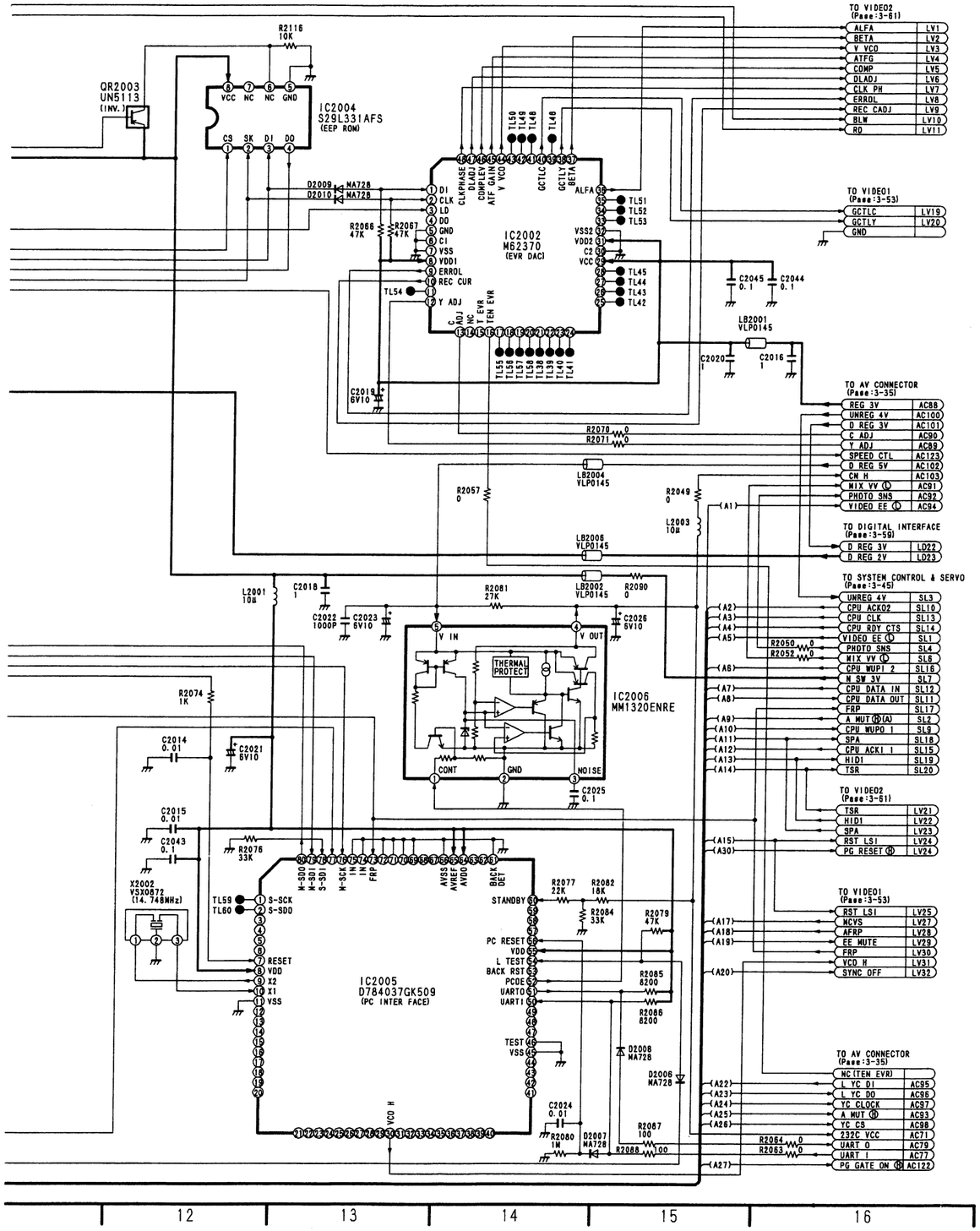


3-13. AV CONNECTOR SECTION IN DIGITAL SCHEMATIC DIAGRAM



3-14. LSI MICON SECTION IN DIGITAL SCHEMATIC DIAGRAM





3—39

IC2001(M31020VLEG)：LSI MICON

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	VSS	—		60	NC	I	—
2	HLDA	O	Ext-Bus Hold Acknowlede/BST TCK (CLK)	61	SPA	I	SPA
3	HOLD	I	Ext-Bus Hold Request	62	AFRP	I	AFRP
4	RESET	I	Reset	63	MCVS	I	MCVS
5	MOD0	I	Single Chip Mode = Vss Vss	64	FRP	I	Frame reference pulse
6	MOD1	I	Memory Extend Mode = Vss Vcc	65	VSS	—	
7	VCC	—		66	VCC	—	
8	VSS	—		67	NC	O	—
9	VCC	—		68	COM RST	O	RS232C RESET
10	NC	O	—	69	COM CLK	I	RS232C CLK IN
11	NC	O	—	70	COM DATA OUT	O	RS232C SERIAL-DATA OUT
12	NC	O	—	71	COM DATA IN	I	RS232C SERIAL-DATA IN
13	NC	O	—	72	RDY CTS	I	from SYSCON ACK
14	NC	O	—	73	CPU CLK	O	to SYSCON CLK
15	NC	O	—	74	CPU DATA OUT	O	to SYSCON DATA
16	L TEST	I	EVR TEST MODE (L)	75	CPU DATA IN	I	from SYSCON DATA
17	SYNC OFF	O	L: Sync Gate Off H: Sync Gate On	76	NC	O	—
18	VSS	—		77	YC CLOCK	O	YC MICON Serial Clook
19	OSC VCC	—		78	L YC DO	O	YC MICON Data out
20	X IN	I	27MHz	79	L YC DI	I	YC MICON Data in
21	X OUT	O	27MHz	80	NC	O	—
22	OSC VSS	—		81	DSC CLK	O	CAS & DVIO Serial Clock
23	VSS	—		82	DSC D0	O	CAS & DVIO Serial Data Out
24	VCC	—		83	DSC D1	I	CAS & DVIO Serial Data In
25	A MUT	O	AUDIO MUTE	84	VCC	—	
26	PG GATE ONⒽ	O	PG GATE Control	85	VSS	—	
27	NC	O	—	86	SSP	I	Sector Start Pulse
28	NC	O	—	87	NC	O	—
29	SYS VIDEO EE	I	SYSCON EE/VV	88	DIF INT	I	Digital Interface IF
30	PG RESETⒽ	O	PG RESET	89	CPU WUPI 2	O	—
31	VIDEO EEⓁ	O	I/O Pack EE/VV Select	90	NC	O	—
32	NC	O	—	91	NMI	I	Pull-up
33	EE MUTE	O	EE MUTE	92	NC	O	—
34	COMRDY	O	232C MICON RDY	93	NC	O	—
35	YC CS	O	YC MICON CS	94	V PLL	O	Video PLL
36	CPU ACK 0-2	O	—	95	FS PLL	O	FS PLL (ATF ERR for Linear arrengement)
37	CTL 27M	O	27MHz Freq. Select	96	NC3(SPEED CTL)	I	CYL PG Amp Control (FF/REW 100 Times or more)
38	NC	O	—	97	NC2(VSYNC)	I	REC V Countermeasure
39	NC	O	—	98	NC1	O	Spare
40	NC	O	—	99	EE CLK	O	EEprom & DAC Clock
41	VCC	—		100	EE DI	I	EEprom & DAC Data In
42	VSS	—		101	VSS	—	
43	VCC	—		102	VCC	—	
44	CPU ACKI-1	I	from SYSCON ACK	103	EE DO	O	EEprom & DAC Data Out
45	CPU WUPO-1	O	to SYSCON REQ	104	EE CS	O	EEprom Chip Select
46	RST LSI	O	DVIO, CAS, EDA Reset	105	GA STP	O	L: Active H: Not Active
47	L SCKL	I	for FLASH CLK	106	DAC LD	O	DAC Load
48	L SDA	I	for FLASH DATA IN	107	DCS STP1	O	DVIO Serial Strobe Pulse
49	RST DIF	O	DIF LSI Reset	108	DCS STP2	O	CAS Serial Strobe Pulse
50	L 0E	I	for FLASH WRITE 0E	109	NC	O	—
51	NC	O	—	110	NC	O	—
52	VCC	—		111	NC	O	—
53	VSS	—		112	NC	O	—
54	NC	O	—	113	AVSS	—	
55	NC	O	—	114	NC	I	Connect to GND (0Ω)
56	TSR	I	Track Start Refference	115	NC	I	Connect to GND (0Ω)
57	HID	I	HSW	116	NC	I	Connect to GND (0Ω)
58	NC	O	—	117	NC	I	Connect to GND (0Ω)
59	NC	I	—	118	NC	I	Connect to GND (0Ω)

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PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
119	NC	I	Connect to GND (0Ω)	138	NC	O	—
120	NC	I	Connect to GND (0Ω)	139	DT15	I/O	EXT-Memory Address/Data Bus
121	NC	I	Connect to GND (0Ω)	140	ADDT14	I/O	EXT-Memory Address/Data Bus
122	NC	I	Connect to GND (0Ω)	141	ADDT13	I/O	EXT-Memory Address/Data Bus
123	NC	I	Connect to GND (0Ω)	142	ADDT12	I/O	EXT-Memory Address/Data Bus
124	NC	I	Connect to GND (0Ω)	143	ADDT11	I/O	EXT-Memory Address/Data Bus
125	NC	I	Connect to GND (0Ω)	144	ADDT10	I/O	EXT-Memory Address/Data Bus
126	NC	I	Connect to GND (0Ω)	145	ADDT9	I/O	EXT-Memory Address/Data Bus
127	AVREF	—		146	ADDT8	I/O	EXT-Memory Address/Data Bus
128	AVCC	—		147	ADDT7	I/O	EXT-Memory Address/Data Bus
129	VCC2	—		148	ADDT6	I/O	EXT-Memory Address/Data Bus
130	VSS	—		149	ADDT5	I/O	EXT-Memory Address/Data Bus
131	NC	O	—	150	ADDT4	I/O	EXT-Memory Address/Data Bus
132	BCLK	O		151	ADDT3	I/O	EXT-Memory Address/Data Bus
133	DC	I	Data Complete for Ext-Momory mode	152	ADDT2	I/O	EXT-Memory Address/Data Bus
134	NC	O	—	153	ADDT1	I/O	EXT-Memory Address/Data Bus
135	ALE	O	Address Latch Enable for Ext-Memory mode	154	ADDT0	I/O	EXT-Memory Address/Data Bus
136	RD	O	Read Strobe for Ext-Memory mode	155	VSS	—	
137	BLW	O	Byte Low Write for Ext-Memory mode	156	VCC2	—	

IC2005 (D784037GK509) : RS-232C INTERFACE MICROCOMPUTER

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	EVR SCK	O	Serial Clock Signal for SYNC Serial Communication (To Camera Micom)	46	TEST	—	GND
				47	NC	O	NC
2	EVR SBO	O	Serial Data Signal for SYNC Serial Communication (To Camera Micom)	48	NC	O	NC
				49	NC	—	NC
5	VTR T	O	SYNC Serial Communication Enable Signal for Camera Micom	50	UARTI	I	RS-232C Data
				51	UARTO	O	RS-232C Data
7	RESET	I	Reset Signal	52	PCOE	O	RS-232C Driver Output Enable
8	VDD	—	VDD (+3V)	53	BACK RST	—	(N.C.)
9	X2	O	Oscillator (14.7456MHz)	54	TEST0	I	VTR Test Signal (H: Normal, L: Test Mode)
10	X1	I	Oscillator (14.7456MHz)				
11	VSS	—	GND	55	VDD	—	VDD (+3V)
12	NC	O	NC	56	PC RESET	I	Reset Signal Detect (AD Input)
13	NC	O	NC	60	STBY	I	RS-232C Cable Connect Confirm
14	NC	O	NC	61	BACK DET	—	GND
15	NC	—	NC	64	AVDD	—	Voltage for AD Converter (+3V)
17	NC	—	NC	65	AVREF1	—	Refference Voltage for AD Converter (+3V)
18	NC	O	NC				
19	NC	—	NC	66	AVSS	—	GND for AD Converter
20	NC	O	NC	67	NC	—	NC
21	NC	O	NC	68	NC	—	NC
22	NC	O	NC	69	NC	—	GND
23	NC	O	NC	70	NC	—	GND
24	NC	—	NC	71	NC	—	GND
25	NC	O	NC	72	NC	—	GND
26	NC	O	NC	73	FRP	I	Frame SYNC Signal
27	NC	O	NC	76	SCK	I	Serial Clock Signal for SYNC Serial Communication (To VTR Micom)
28	NC	O	NC				
29	NC	O	NC	77	COM RDY	I	SYNC Serial Communication Enable Signal for VTR Micom
30	VCO H	O	VCO Test Mode Ⓗ				
31	NC	O	NC	78	EVR SDI	I	Serial Data Input for SYNC Serial Communication (To Camera Micom)
32	NC	O	NC				
33	NC	O	NC	79	SDI	I	Serial Data for SYNC Serial Communication (To VTR Micom)
34	NC	O	NC				
35	NC	O	NC	80	SDO	O	Serial Data for SYNC Serial Communication (To VTR Micom)
44	NC	—	NC				
45	VSS	—	GND				

LSI MICON ICs DC VOLTAGE CHART (Mini DV : SP MODE)

REF. NO.	IC2001																		
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.6	3.6	2.7	0	3.6	3.6	0	3.6	0	0	0	0	0	0	3.6	3.6	0	3.6	1.7
PLAY	0	3.6	3.6	2.7	0	3.6	3.6	0	3.6	0	0	0	0	0	0	3.6	0	0	3.6	1.7
REC	0	3.6	3.6	2.7	0	3.6	3.6	0	3.6	0	0	0	0	0	0	3.6	3.6	0	3.6	1.7
F.F	0	3.6	3.6	2.7	0	3.6	3.6	3.6	3.6	0	0	0	0	0	0	3.6	3.6	0	3.6	1.7
REW	0	3.6	3.6	2.6	0	3.6	3.6	0	3.6	0	0	0	0	0	0	0	3.6	0	3.6	1.7
REF. NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.7	0	0	3.6	0	0	0	0	0	0	0	0	0	3.6	3.3	0	0	0	0	0
PLAY	1.8	0	0	3.6	0	0	0	0	3.6	0	3.6	0	0	3.6	3.3	0	3.6	0	0	0
REC	1.7	0	0	3.6	0	0	0	0	0	0	0	0	0	3.6	3.3	0	0	0	0	0
F.F	1.8	0	0	3.6	0	0	0	0	0	0	0	0	0	3.6	3.3	0	0	0	0	0
REW	1.8	0	0	3.5	0	3.6	0	0	0	0	0	0	0	3.6	3.3	0	0	0	0	0
REF. NO.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.6	0	3.6	0	0	3.6	3.6	3.6	3.6	3.6	0	3.6	0	0	0	1.5	1.5	0	1.7	0.2
PLAY	3.6	0	3.6	0	0	3.6	3.6	3.6	3.6	3.6	0	3.6	0	0	0	1.5	1.5	0	1.7	0.2
REC	3.6	0	3.6	0	0	3.6	3.6	3.6	3.6	3.6	0	3.6	0	0	0	1.5	1.5	0	1.7	0.2
F.F	3.6	0	3.6	0	0	3.6	3.6	3.6	3.6	3.6	0	3.6	0	0	0	1.5	1.5	0	1.7	0.2
REW	3.6	0.7	3.6	0	0	3.6	3.6	3.6	3.6	3.6	0	3.6	0	0	0	1.5	1.5	0	1.6	0.2
REF. NO.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	1.5	1.5	1.5	0	3.6	0	3.6	3.5	3.3	0.1	3.6	3.6	3.6	1.8	0	3.6	3.5	2.8	0
PLAY	0	1.5	1.5	1.5	0	3.6	0	3.6	3.5	3.3	0.1	3.6	3.6	3.6	1.5	0	3.6	3.5	2.8	0
REC	0	1.5	1.5	1.5	0	3.6	0	3.6	3.5	3.3	0	3.6	3.6	3.6	1.8	0	3.6	3.5	2.8	0
F.F	0	1.5	1.5	1.5	0	3.6	0	3.6	3.5	3.3	0.1	3.6	3.6	3.6	1.8	0	3.6	3.5	2.8	0
REW	0	1.5	1.5	1.5	0	3.6	0	3.6	3.5	3.3	0.1	3.6	3.6	3.6	1.8	0	3.6	3.5	2.8	0.9
REF. NO.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.6	2.9	2.9	3.6	0	0	0	3.0	0	0	3.6	0	0	1.1	0	1.0	0	3.6	3.6	1.6
PLAY	3.6	3.0	2.9	3.6	0	0	0	3.0	0	0	3.6	0	0	0	1.6	1.0	0	3.6	3.6	1.1
REC	3.6	3.2	2.9	3.6	0	0	0	3.0	0	0	3.6	0	0	1.1	0	0.9	0	3.6	3.6	1.8
F.F	3.6	3.1	2.9	3.5	0	0	0	3.0	0	0	3.6	0	0	1.1	0	1.1	1.0	3.6	3.6	1.8
REW	3.6	3.3	2.9	3.6	0	0	0	3.0	0	0	3.6	0	0	1.1	0	1.0	3.6	3.6	3.6	1.8
REF. NO.	IC2001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	3.6	3.6	0	0	0	2.7	3.5	0	0	0	0	0	1.5	1.5	1.5	0	0	0	0
PLAY	0	3.6	3.6	0	0	0	2.7	3.4	0	0	0	0	0	1.1	1.1	1.1	0	0	0	0
REC	0	3.6	3.6	0	0	0	2.7	3.4	0	0	0	0	0	1.7	1.8	1.7	0	0	0	0
F.F	0	3.6	3.6	0	0	0	2.7	3.5	0	0	0	0	0	1.8	1.8	1.8	0	0	0	0
REW	0	3.6	3.6	0	0	0	2.7	3.4	0	0	0	0	0	1.4	1.4	1.5	0	0	0	0
REF. NO.	IC2001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	0	0	0	0	0	0	3.6	3.6	2.2	0	0	0.7	0	0	0	2.2	2.1	2.2	0.1	0
PLAY	0	0	0	0	0	0	3.6	3.6	2.2	0	0	0.7	0	0	0	2.1	2.2	2.2	0.1	0.1
REC	0	0	0	0	0	0	3.6	3.6	2.2	0	0	0.7	0	0	0	2.2	2.1	2.1	0.1	0.1
F.F	0	0	0	0	0	0	3.6	3.6	2.2	0	0	0.7	0	0	0	2.2	0	0	0.6	0
REW	0	0	0	0	0	0	3.6	3.6	3.6	0	0	0.7	0	0	0	2.2	2.2	2.2	0.1	0
REF. NO.	IC2001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156				
STOP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.2				
PLAY	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	2.2				
REC	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	2.2				
F.F	2.2	2.2	2.2	2.2	2.2	2.2	0	2.2	2.2	0	0	0	0	0	0	2.2				
REW	0.1	0	0	0.1	0.1	0.1	0.1	0	0.1	0.1	0	0	0	0	0	2.2				
REF. NO.	IC2002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.1	3.1	0	0	0	0	0	3.2	1.0	1.9	0	0	0	0	0	0	0	0	0	0
PLAY	3.1	3.1	0	0	0	0	0	3.2	1.0	1.9	0.1	0.1	0	0.1	0	0.1	0.1	0.1	0	0
REC	3.1	3.1	0	0	0	0	0	0	0	1.9	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0
F.F	3.1	0	0	0	0	0	0	3.2	1.0	1.9	0	0	0	0	0	0	0	0	0	0
REW	3.1	3.1	0	0	0	0	0	3.2	1.0	1.9	0	0	0	0	0	0.1	0.1	0	0.1	0.1
REF. NO.	IC2002																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	0	0	0	0	3.2	0	3.2	0	0	0	0	1.9	1.6	2.5	0	0
PLAY	0	0.1	0	0.1	0	0.1	0.1	0	3.2	0	3.2	0	0.1	0	0.1	1.9	1.6	2.5	0.1	0
REC	0.1	0.1	0.1	0	0	0.1	0.1	0.1	3.2	0	3.2	0	0	0	0	1.9	1.6	2.5	0.1	1.4
F.F	0	0	0	0	0	0	0	0	3.2	0	3.2	0	0	0	0	1.9	1.6	2.5	0	0
REW	0	0	0	0	0	0	0	0	3.2	0	3.2	0	0.1	0	0.1	1.9	1.6	2.5	0	1.4

REF. NO.	IC2002																			
MODE	41	42	43	44	45	46	47	48												
STOP	0	0	0	0	0	1.4	0.8	1.3												
PLAY	0.1	0.1	0.1	2.0	2.0	1.4	0	1.3												
REC	0.1	0.1	0.1	0	0	1.4	0.8	1.3												
F.F	0	0	0	0	2.0	1.4	0.8	1.3												
REW	0	0	0	0	2.0	1.4	0.8	1.3												

REF. NO.	IC2003										IC2004									
MODE	1	2	3								1	2	3	4	5	6	7	8		
STOP	3.2	0	3.2								0	3.6	3.6	1.7	0	0	0.6	3.7		
PLAY	3.2	0	3.2								0	3.6	3.6	1.6	0	0	0.8	3.7		
REC	3.2	0	3.2								0	3.6	3.6	1.7	0	0	0.8	3.6		
F.F	3.2	0	3.2								0	3.6	3.6	1.7	0	0	0.9	3.7		
REW	3.2	0	3.2								0	3.6	3.6	1.7	0	0	0.8	3.7		

REF. NO.	IC2005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	3.0	0.8	0	0	3.7	0	3.6	3.7	1.8	1.6	0	0	0	3.7	3.7	0	0	3.7	0	0
PLAY	3.0	0.8	0	0	3.7	0	3.6	3.7	1.8	1.7	0	0	0	3.7	3.7	0	0	3.7	0	0
REC	3.0	0.8	0	0	3.6	0	3.6	3.6	1.8	1.5	0	0	0	3.6	3.6	0	0	3.6	0	0
F.F	3.0	0.8	0	0	3.7	0	3.6	3.7	1.8	1.5	0	0	0	3.7	3.7	0	0	3.7	0	0
REW	3.0	0.8	0	0	3.7	0	3.6	3.7	1.8	1.5	0	0	0	3.7	3.7	0	0	3.7	0	0

REF. NO.	IC2005																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	0	3.7	0	3.7	3.7	0	0	3.7	3.7	3.7	0	0	0	0	0	0
PLAY	0	0	0	0	0	3.7	0	3.7	3.7	0	0	3.7	3.7	3.7	0	0	0	0	0	0
REC	0	0	0	0	0	3.6	0	3.6	3.6	0	0	3.6	3.6	3.6	0	0	0	0	0	0
F.F	0	0	0	0	0	3.7	0	3.7	3.7	0	0	3.7	3.7	3.6	0	0	0	0	0	0
REW	0	0	0	0	0	3.7	0	3.7	3.7	0	0	3.7	3.7	3.7	0	0	0	0	0	0

REF. NO.	IC2005																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0	0	0	0	0	3.7	0	3.4	3.7	3.7	0	3.6	3.7	3.3	0	0	0	2.1
PLAY	0.1	0	0	0	0	0	0	3.7	0	3.4	3.7	3.7	0	3.6	3.7	3.3	0	0.1	0	2.1
REC	0	0	0	0	0	0	0	3.6	0	3.4	3.6	3.6	0	3.6	3.6	3.3	0	0	0	2.1
F.F	0	0	0	0	0	0	0	3.7	0	3.4	3.7	3.7	0	3.6	3.7	3.3	0	0	0	2.1
REW	0	0	0	0	0	0	0	3.7	0	3.4	3.7	3.7	0	3.6	3.7	3.3	0	0	0	2.1

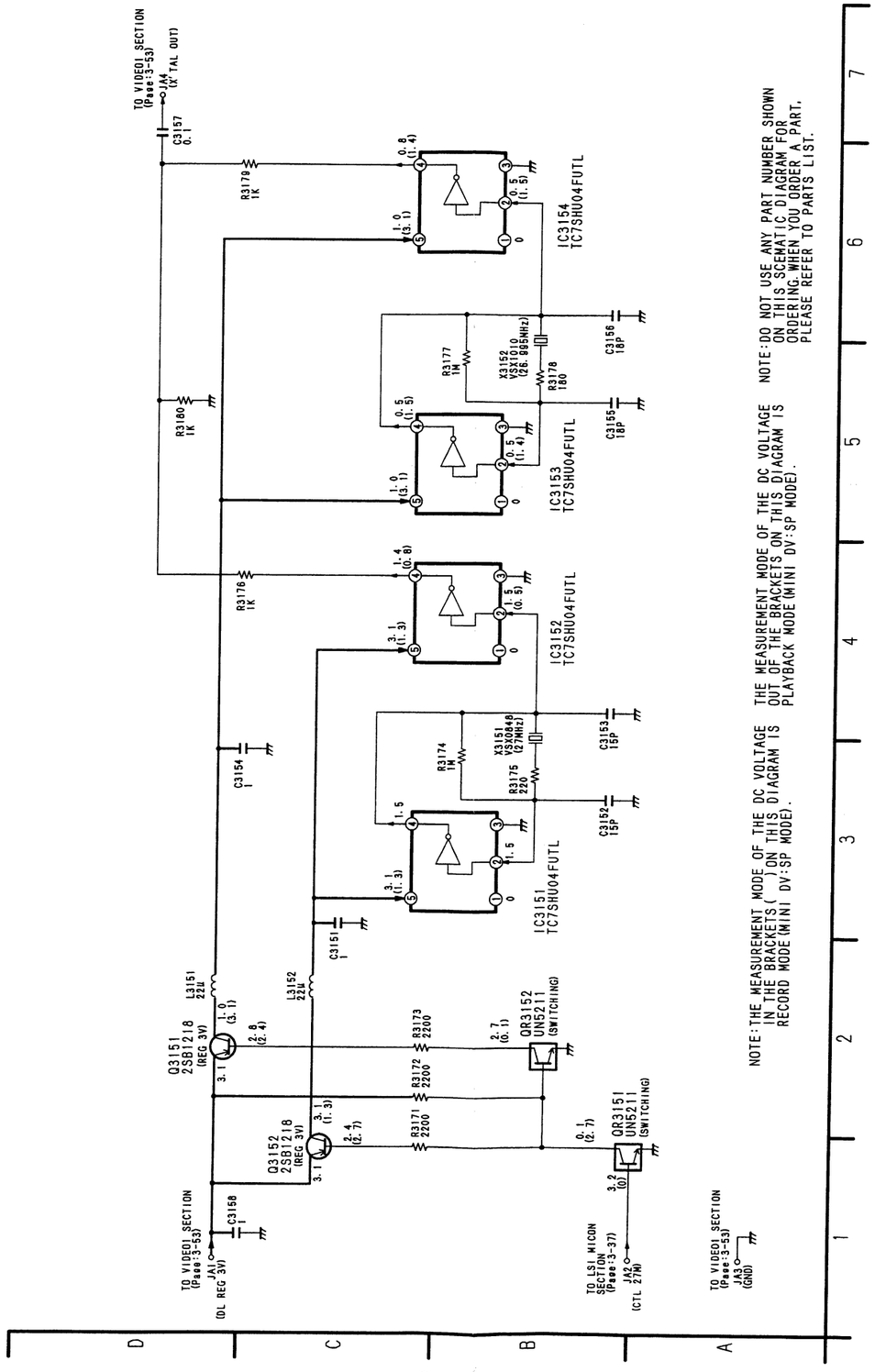
REF. NO.	IC2005																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	3.7	3.7	0	0	0	0	0	0	0	1.5	0	0	3.5	3.6	0	3.3	0.1
PLAY	0	0	0	3.7	3.7	0	0	0	0	0	0	0.1	1.5	0	0	3.5	3.6	0	3.3	0.1
REC	0	0	0	3.6	3.6	0	0	0	0	0	0	0	1.5	0	0	3.5	3.6	0	3.3	0.1
F.F	0	0	0	3.7	3.7	0	0	0	0	0	0	0	1.5	0	0	3.5	3.6	0	3.3	0.1
REW	0	0	0	3.7	3.7	0	0	0	0	0	0	0	1.5	0	0	3.5	3.6	0	3.3	0.1

REF. NO.	IC2006																			
MODE	1	2	3	4	5															
STOP	3.7	0	1.2	3.3	5.2															
PLAY	3.7	0	1.2	3.3	5.1															
REC	3.7	0	1.2	3.3	5.1															
F.F	3.7	0	1.2	3.3	5.1															
REW	3.7	0	1.2	3.3	5.1															

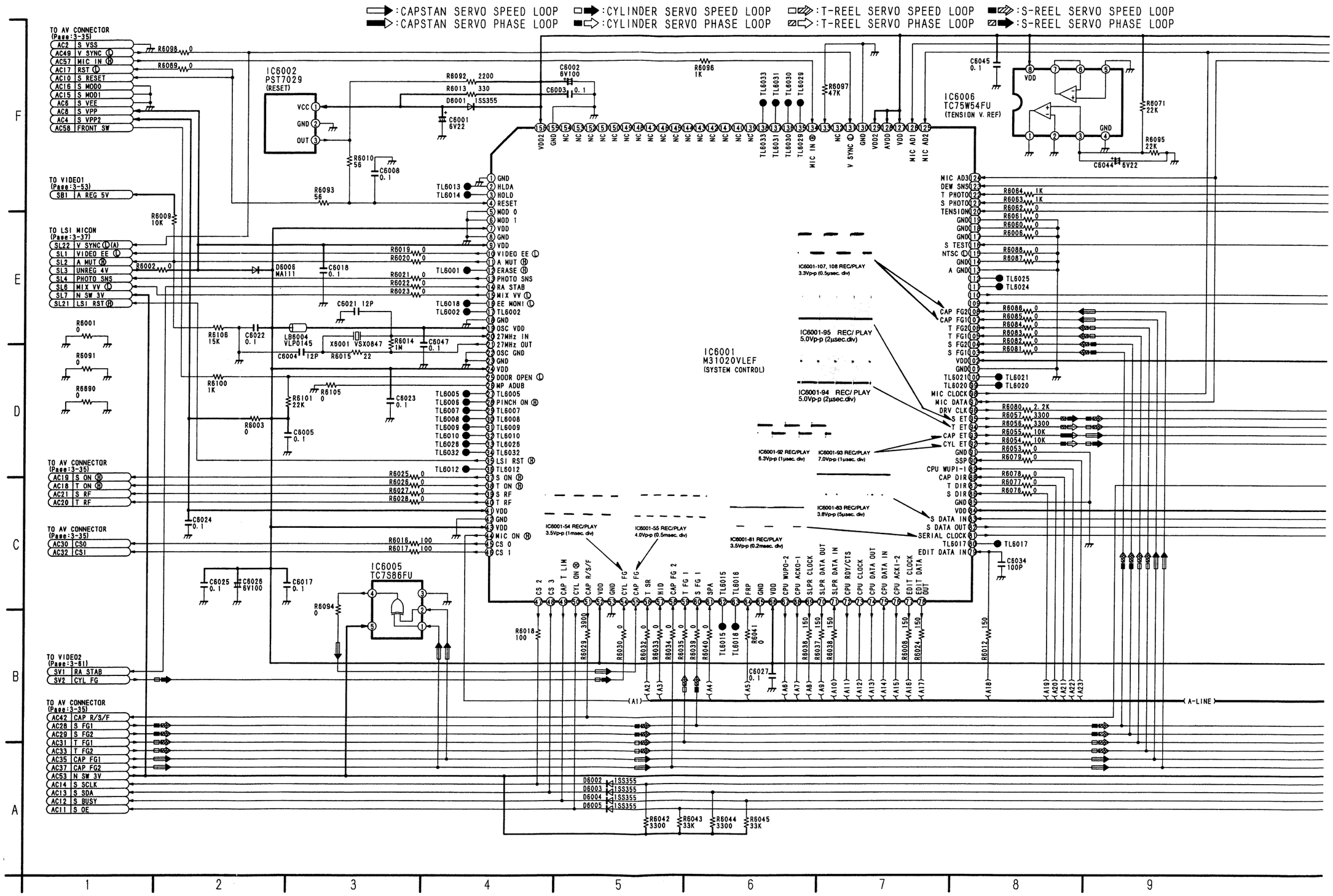
LSI MICON TRs DC VOLTAGE CHART (Mini DV : SP MODE)

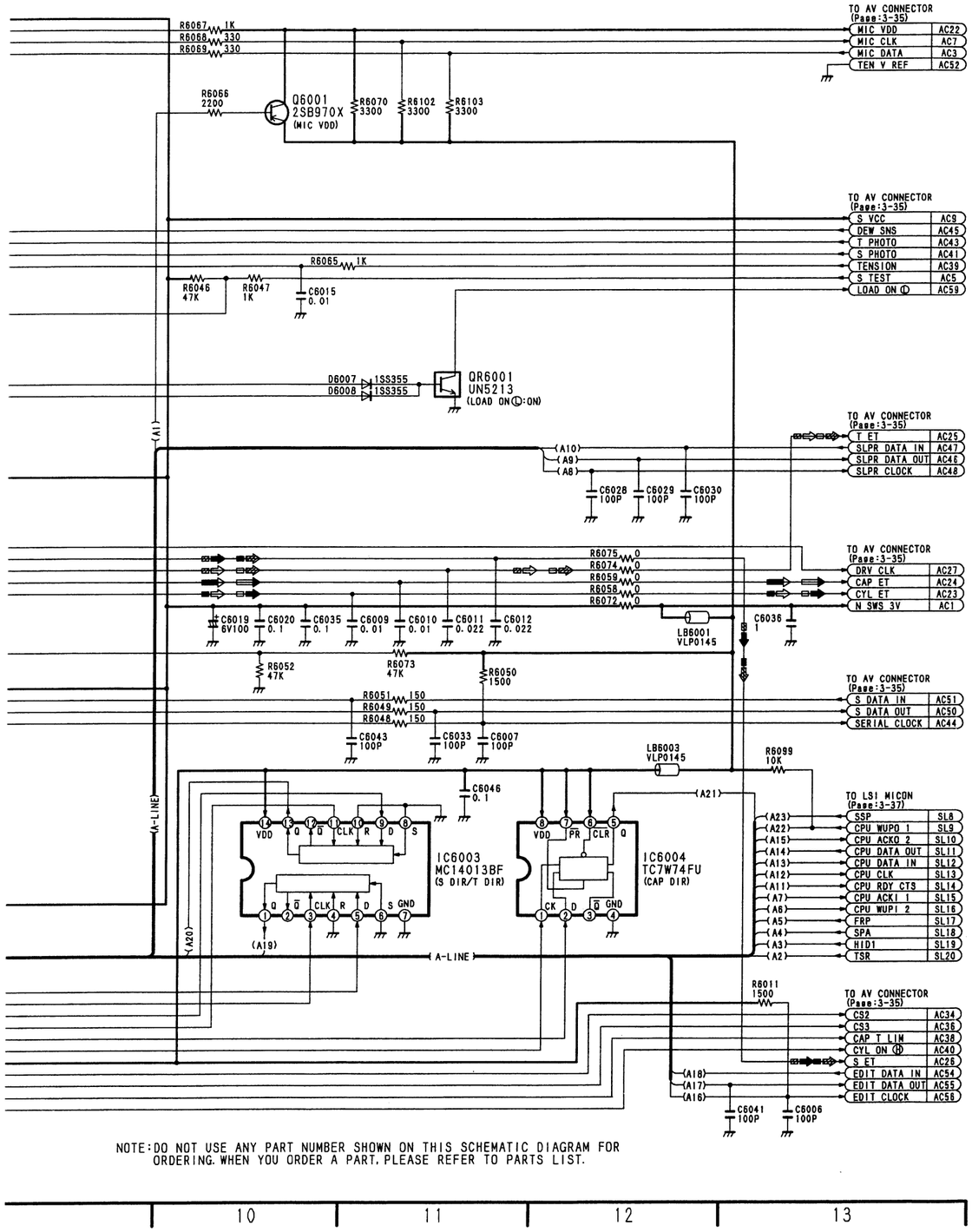
REF. NO.	QR2001			QR2002			QR2003		
MODE	E	C	B	E	C	B	E	C	B
STOP	0	3.2	0	0	3.1	0	3.2	0	3.2
PLAY	0	3.2	0	0	3.1	0	3.2	0	3.2
REC	0	3.2	0	0	3.1	0	3.2	0	3.2
F.F	0	3.2	0	0	3.1	0	3.2	0	3.2
REW	0	3.2	0	0	3.1	0	3.2	0	3.2

3-15. CLOCK CHANGE SCHEMATIC DIAGRAM



3-16. SYSTEM CONTROL & SERVO SECTION IN DIGITAL SCHEMATIC DIAGRAM





NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IC6001 (M31020VLEF) : SYSTEM CONTROL MICROPROCESSOR

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	GND	—		55	CAP.FG	I	CAPSTAN 2 PHASE FG
2	HLDA	O	Low FIX	56	TSR	I	HID PHASE REF. SIGNAL
3	HOLD	O	Low FIX	57	HID	I	HEAD SELECT SW
4	RESET	I	RESET INPUT	58	CAP.FG2	I	CAPSTAN FG 2
5	MOD0	I	SIGNAL CHIP MODE SELECT	59	T.FG1	I	T REEL FG 1
6	MOD1	I	SIGNAL CHIP MODE SELECT	60	S.FG1	I	S REEL FG 1
7	VDD	—	VDD	61	SPA	I	
8	GND	—	GND	62	—	O	FIX Low OUTPUT
9	VDD	—	VDD	63	—	O	FIX Low OUTPUT
10	VIDEO.EEⓁ	O	EE/VV SELECT OUTPUT (EE: L)	64	FRP	I	FRAME REF. SIGNAL
11	A.MUTⒽ	O	AUDIO MUTE Ⓗ	65	GND	—	GND
12	ERASEⒽ	O	ERASE ON Ⓗ/OFF	66	VDD	—	POWER
13	PHOTO.SNS	O	TAPE SENSOR LED (ON: L)	67	CPU WUP0-2	O	SYS CTL µ-PROCESSOR ⟷ LSI (OMMUNICATION)
14	RASTAB	O	S TAB OUTPUT				
15	MIX.VVⓁ	O	MIX OUTPUT (VV MODE): L	68	CPU ACK0-1	O	SYS CTL µ-PROCESSOR ⟷ LSI (OMMUNICATION)
16	EE.MONIⓁ	O	EE MONITOR OUT: L				
17	—	O	FIX LOW OUTPUT	69	SLPR.CLOCK	O	SERIAL/PARALLEL CONVERSION EXPANSION IC
18	GND	—	GND				
19	OSC VDD	—	OSC POWER	70	SLPR. DATA. OUT	O	SERIAL/PARALLEL CONVERSION EXPANSION IC
20	27MHz. IN	I	27MHz INPUT				
21	27MHz. OUT	O	27MHz OUTPUT	71	SLPR. DATA. IN	I	SERIAL/PARALLEL CONVERSION EXPANSION IC
22	OSC GND	—	OSC GND				
23	GND	—	GND	72	CPU RDY/CTS	O	SYS CTL µ-PROCESSOR ⟷ LSI COMMUNICATION
24	VDD	—	POWER				
25	DOOR OPENⓁ	I	FRONT DOOR OPEN DETECT INPUT (OPEN: L, CLOSE/NO DOOR: H)	73	CPU CLOCK	I	SYS CTL µ-PROCESSOR ⟷ LSI SERIAL SLAVE CLOCK
26	MP ADUB	O	FIX Low OUTPUT	74	CPU DATA OUT	O	SYS CTL µ-PROCESSOR ⟷ LSI SERIAL DATA OUTPUT
27	—	O	FIX Low OUTPUT				
28	PINCH ONⒽ	O	PINCH SOLENOID CONTROL OUTPUT	75	CPU DATA IN	I	SYS CTL µ-PROCESSOR ⟷ LSI SERIAL DATA INPUT
29	—	O	FIX Low OUTPUT				
30	—	O	FIX Low OUTPUT	76	CPU ACKI-2	O	SYS CTL µ-PROCESSOR ⟷ LSI COMMUNICATION
31	—	O	FIX Low OUTPUT				
32	—	O	TRAY MOTOR VOLTAGE CONTROL OUTPUT	77	EDIT.CLOCK	O	SYS CTL µ-PROCESSOR ⟷ EDIT MICON SERIAL MASTER CLOCK
33	—	O	S REEL SOLENOID CONTROL OUTPUT				
34	—	O	T REEL SOLENOID CONTROL OUTPUT	78	EDIT. DATA. OUT	O	SYS CTL µ-PROCESSOR ⟷ EDIT MICON SERIAL DATA OUTPUT
35	LSI RSTⒽ	O	RESET High OUTPUT				
36	—	O	FIX LOW OUTPUT	79	EDIT. DATA. IN	I	SYS CTL µ-PROCESSOR ⟷ EDIT MICON SERIAL DATA INPUT
37	S.ONⒽ	O	S REEL ON/OFF CONTROL				
38	T.ONⒽ	O	T REEL ON/OFF CONTROL	80	—	O	FIX Low OUTPUT
39	S.RF	O	S REEL ROTATION DIRECTION CONTROL	81	SERIAL.CLOCK	O	TIMER ⟷ SYS CTL µ-PROCESSOR MASTER CLOCK
40	T.RF	O	T REEL ROTATION DIRECTION CONTROL				
41	VDD	—	POWER	82	S. DATA. OUT	O	TIMER ⟷ SYS CTL µ-PROCESSOR SIRIAL DATA OUTPUT
42	GND	—	GND				
43	VDD	—	POWER	83	S. DATA. IN	I	TIMER ⟷ SYS CTL µ-PROCESSOR SIRIAL DATA INPUT
44	MIC.ONⒽ	O	POWER FOR MIC				
45	CS0	O	SERIAL/PARALLEL CONVERSION IC CHIP SELECT SIGNAL	84	VDD	—	POWER
				85	GND	—	GND
46	CS1	O	SERIAL/PARALLEL CONVERSION IC CHIP SELECT SIGNAL	86	S. DIR	I	S REEL ROTATION DIRECTION DET.
				87	T. DIR	I	T REEL ROTATION DIRECTION DET.
47	CS2	O	SERIAL/PARALLEL CONVERSION IC CHIP SELECT SIGNAL	88	CAP. DIR	I	CAPSTAN ROTATION DIRECTION DET.
48	CS3	O	SERIAL/PARALLEL CONVERSION IC CHIP SELECT SIGNAL	89	CPU WUPI-1	O	SYS CTL µ-PROCESSOR ⟷ LSI PROCESSOR COMMUNICATION
				90	SSP	I	SECTOR START PULSE INPUT
49	CAP.T.LIM	O	CAP TORQUE LIMIT	91	—	—	
50	CYL.ONⓁ	O	CYL DRIVING: Low	92	CYL. ET	O	CYLINDER TORQUE OUTPUT (12bit PWM)
51	CAP.R/S/F	O	CAPSTAN ROTATION DIRECTION CONTROL	93	CAP. ET	O	CAPSTAN TORQUE OUTPUT (12bit PWM)
52	VDD	—	POWER	94	T. ET	O	T REEL TORQUE OUTPUT (12bit PWM)
53	GND	—	GND	95	S. ET	O	S REEL TORQUE OUTPUT (14bit PWM)
54	CYL.FG	I	CYLINDER FG	96	DRV. CLK	O	CYLINDER DRIVER CLOCK

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
97	MIC. DATA	I/O	MIC SERIAL DATA	127	VDD	—	REF. POWER FOR ANALOG
98	MIC. CLK	O	MIC SERIAL CLOCK	128	AVDD	—	ANALOG POWER
99	—	O	TIMER SERIAL CLOCK (500µ sec.)	129	VDD2	—	POWER FOR BUS
100	—	O	SYS. CTL MAIN ROUTIN (20msec.)	130	GND	—	GND
101	GND	—	GND	131	VSYNCⓁ	I	V SYNC INPUT (SYNC EXIST: L)
102	VDD	—	POWER	132	—	O	
103	S. FG1	I	S REEL FG 1	133	—	I	GND (VIA 47k Resistor)
104	S. FG2	I	S REEL FG 2	134	MIC INⒽ	I	MIC INPUT (MIC IN: H)
105	T. FG1	I	T REEL FG 1	135	—	O	FIX Low OUTPUT
106	T. FG2	I	T REEL FG 2	136	—	O	FIX Low OUTPUT
107	CAP. FG1	I	CAPSTAN FG 1	137	—	O	FIX Low OUTPUT
108	CAP. FG2	I	CAPSTAN FG 2	138	—	O	FIX Low OUTPUT
109	LOADⒽ	O	LOADING MOTOR FORWARD OUTPUT	139	—	O	
110	UNLOADⒽ	O	LOADING MOTOR REVERSE OUTPUT	140	—	O	FIX Low OUTPUT
111	—	O	TRAY MOTOR FORWARD OUTPUT	141	—	O	FIX Low OUTPUT
112	—	O	TRAY MOTOR REVERSE OUTPUT	142	—	O	FIX Low OUTPUT
113	A GND	—	GND	143	—	O	FIX Low OUTPUT
114	GND	—	GND	144	—	O	FIX Low OUTPUT
115	NTSCⓁ	I	NTSC = LOW/PAL = HIGH	145	—	O	FIX Low OUTPUT
116	S. TEST	I	EVR ADJ INPUT	146	—	O	FIX Low OUTPUT
117	—	—	VIA RESISTOR GND	147	—	O	FIX Low OUTPUT
118	—	—	VIA RESISTOR GND	148	—	O	FIX Low OUTPUT
119	—	—	VIA RESISTOR GND	149	—	O	FIX Low OUTPUT
120	TENSION	I	TAPE TENSION A/D INPUT	150	—	O	FIX Low OUTPUT
121	S. PHOTO	I	S PHOTO SENSOR INPUT (BLACK TAPE: L)	151	—	O	FIX Low OUTPUT
122	T. PHOTO	I	T PHOTO SENSOR INPUT (BLACK TAPE: L)	152	—	O	FIX Low OUTPUT
123	DEW. SNS	I	DEW SENSOR INPUT	153	—	O	FIX Low OUTPUT
124	MIC. AD3	I	A/D INPUT 3 FOR MIC	154	—	O	FIX Low OUTPUT
125	MIC. AD2	I	A/D INPUT 2 FOR MIC	155	GND	—	GND
126	MIC. AD1	I	A/D INPUT1 FOR MIC	156	VDD 2	I	POWER

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (Mini DV : SP MODE)

REF. NO. / MODE	IC6001																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	2.7	0	0	3.6	0	3.6	0	0	0	0	3.6	3.6	3.6	0	0	3.6	1.8
PLAY	0	0	0	2.7	0	0	3.6	0	3.6	3.6	0	0	3.6	3.6	3.6	3.6	0	0	3.6	1.8
REC	0	0	0	2.6	0	0	3.6	0	3.6	0	0	3.6	3.6	0	3.6	3.6	0	0	3.6	1.8
F.F	0	0	0	2.7	0	0	3.6	0	3.6	0	0	0	3.6	3.6	3.6	3.6	0	0	3.6	1.8
REW	0	0	0	2.6	0	0	3.6	0	3.6	0	0	0	0	3.6	3.6	3.6	0	0	3.6	1.8

REF. NO. / MODE	IC6001																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	1.8	0	0	3.6	0.1	0	0	0	0	0	0	3.6	0	0	0	0	0	0	3.6	0
PLAY	1.7	0	0	3.6	0.1	0	0	3.6	0	0	0	3.6	0	0	0	0	3.6	3.6	3.6	0
REC	1.8	0	0	3.6	0.1	0	0	3.6	0	0	0	3.6	0	0	0	0	3.6	3.6	3.6	0
F.F	1.2	0	0	3.6	0.1	0	0	0	0	0	0	3.6	0	0	0	0	3.6	3.6	3.6	0
REW	1.7	0	0	3.6	0.1	0	0	0	0	0	0	3.6	0	0	0	0	3.6	3.6	3.6	3.6

REF. NO. / MODE	IC6001																			
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	3.6	0	3.6	3.6	0	0	0	0	3.6	3.6	1.8	3.6	0	3.4	0	1.5	0	0	3.3	3.3
PLAY	3.6	0	3.6	3.6	0.5	0.4	0.4	0.4	3.6	0	0	3.6	0	0	1.7	1.8	1.5	1.6	1.7	1.7
REC	3.6	0	3.6	3.6	0.4	0.3	0.4	0.4	3.6	0	0	3.6	0	1.7	1.8	1.5	1.5	1.6	1.7	1.7
F.F	3.6	0	3.6	3.6	0.4	0.4	0.4	0.4	3.6	1.8	1.8	3.6	0	1.7	0	1.5	1.5	0	1.6	1.6
REW	3.6	0	3.6	3.6	3.6	0.3	0.4	0.4	3.6	0	1.8	3.6	0	1.7	0	1.5	1.5	0	1.6	1.6

REF. NO. / MODE	IC6001																			
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	1.5	0	3.6	0	0	3.6	0	3.7	3.6	3.6	3.6	3.6	0	3.6	3.6	3.7	0
PLAY	0	0	0	1.5	0	3.6	0	0	3.3	1.0	3.3	3.6	3.6	1.5	3.6	0	3.3	2.9	3.6	0
REC	0	0	0	1.5	1.5	3.6	0	0	3.3	1.0	3.2	3.6	3.6	1.8	3.6	0	3.3	2.8	3.6	0
F.F	0	0	0	1.5	0	3.6	0	0	3.3	3.3	3.3	3.6	3.6	3.6	3.6	0	2.8	2.8	3.6	0
REW	0	0	0	1.5	0	3.6	0	0	3.3	1.0	3.3	3.6	1.1	3.6	2.6	0	3.3	2.8	3.6	0

REF. NO. / MODE	IC6001																			
	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	3.6	3.6	3.7	3.6	0	3.7	3.7	3.7	3.7	0	0	0	3.6	1.8	0	1.8	3.7	3.7	0	3.6
PLAY	3.1	3.0	3.5	3.6	0	0	0	3.7	0	0	0	1.9	1.6	0.3	0.1	1.8	3.7	3.7	0.1	1.8
REC	3.1	3.0	3.5	3.6	0	0	0	3.6	3.6	0	0	0	1.9	0.2	0.1	1.8	3.6	3.7	3.7	1.8
F.F	3.1	3.1	3.5	3.6	0	0	0	0	0	0	0	1.9	1.8	0.7	0	1.8	3.6	3.7	0.1	1.8
REW	3.1	3.0	3.5	3.6	0	3.7	3.7	3.7	0	0	0	1.9	1.8	0	0.4	1.8	3.7	3.7	0.1	1.8

REF. NO. / MODE	IC6001																			
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	0	3.6	3.3	0	3.3	0	0	0	0	0	0	0	1.8	3.6	3.6	0	0	0	3.3
PLAY	0	3.6	1.6	1.7	1.6	1.6	1.6	1.6	0	0	0	0	0	1.8	3.6	3.6	0	0	0	2.7
REC	0	3.6	1.7	1.6	1.6	1.7	1.6	1.6	0	0	0	0	0	1.8	3.6	3.6	0	0	0	2.7
F.F	0	3.6	1.6	1.6	1.6	1.6	0	3.3	0	0	0	0	0	1.8	3.6	3.6	0	0	0	2.1
REW	0	3.6	1.6	1.6	1.6	1.6	2.9	3.3	0	0	0	0	0	1.8	3.6	3.6	0	0	0	1.0

REF. NO. / MODE	IC6001																			
	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
STOP	0	0	0	3.7	3.7	3.7	3.6	3.6	3.6	0	0	2.5	2.2	0	3.0	3.6	3.6	3.6	1.7	1.7
PLAY	0.1	0.1	0.1	3.7	3.7	3.7	3.6	3.6	3.6	0	0	2.3	0	0	0	3.6	3.6	3.6	1.6	1.6
REC	0	0	0	3.7	3.7	3.7	3.6	3.6	3.6	0	0	2.2	0	0	0	3.6	3.6	3.6	1.7	1.7
F.F	0.1	0	0	3.7	3.7	3.7	3.6	3.6	3.6	0	0	2.2	0	0	0	3.6	3.6	3.6	1.6	1.6
REW	0.1	0.1	0	3.7	3.7	3.7	3.6	3.6	3.6	0	0	2.2	0	0	0	3.6	3.6	3.6	1.7	1.6

REF. NO. / MODE	IC6001																			
	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156				
STOP	1.7	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0	3.6				
PLAY	1.5	1.6	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.5	1.5	1.5	1.6	1.6	0	3.6				
REC	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	0	3.6				
F.F	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.6	0	3.6				
REW	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	0	3.6				

REF. NO. / MODE	IC6002																			
	1	2	3																	
STOP	3.6	0	3.4																	
PLAY	3.6	0	3.4																	
REC	3.6	0	3.4																	
F.F	3.6	0	3.4																	
REW	3.6	0	3.4																	

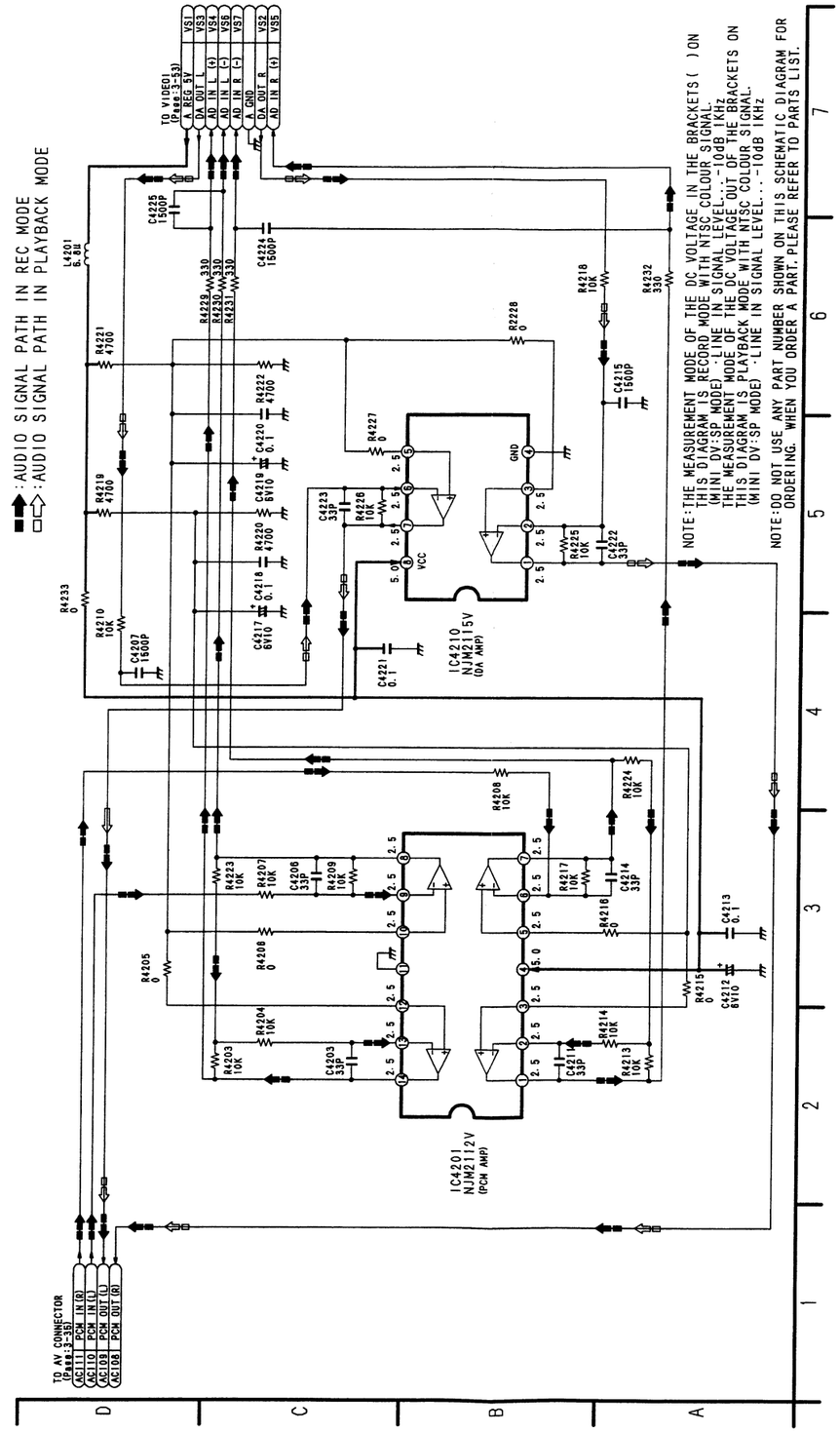
REF. NO. / MODE	IC6003																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	3.7	0	0	0	3.3	0	0	0	3.3	0	3.3	0	3.7	3.7						
PLAY	0	3.7	1.7	0	1.6	0	0	0	1.6	0	1.6	3.7	0	3.7						
REC	0	3.7	1.6	0	1.6	0	0	0	1.6	0	1.6	3.7	0	3.7						
F.F	0	3.7	1.5	0	1.5	0	0	0	1.5	0	1.6	3.7	0	3.7						
REW	3.7	0	1.5	0	1.5	0	0	0	1.6	0	1.6	0	3.7	3.7						

REF. NO.	IC6004										IC6005									
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5					
STOP	0	0	0	0	3.6	3.7	3.7	3.7			0	0	0	0	3.7					
PLAY	1.6	1.6	0	0	3.7	3.7	3.7	3.7			1.6	1.6	0	1.8	3.7					
REC	1.6	1.6	0	0	3.7	3.7	3.7	3.7			1.6	1.6	0	1.8	3.7					
F.F	3.3	0	3.7	0	0	3.7	3.7	3.7			0	0	0	0	3.7					
REW	0	3.3	0	0	3.7	3.7	3.7	3.7			0	3.3	0	3.7	3.7					
REF. NO.	IC6006																			
MODE	1	2	3	4	5	6	7	8												
STOP	1.8	1.8	1.8	0	0	0	0	3.6												
PLAY	1.8	1.8	1.8	0	0	0	0	3.6												
REC	1.8	1.8	1.8	0	0	0	0	3.6												
F.F	1.8	1.8	1.8	0	0	0	0	3.6												
REW	1.8	1.8	1.8	0	0	0	0	3.6												

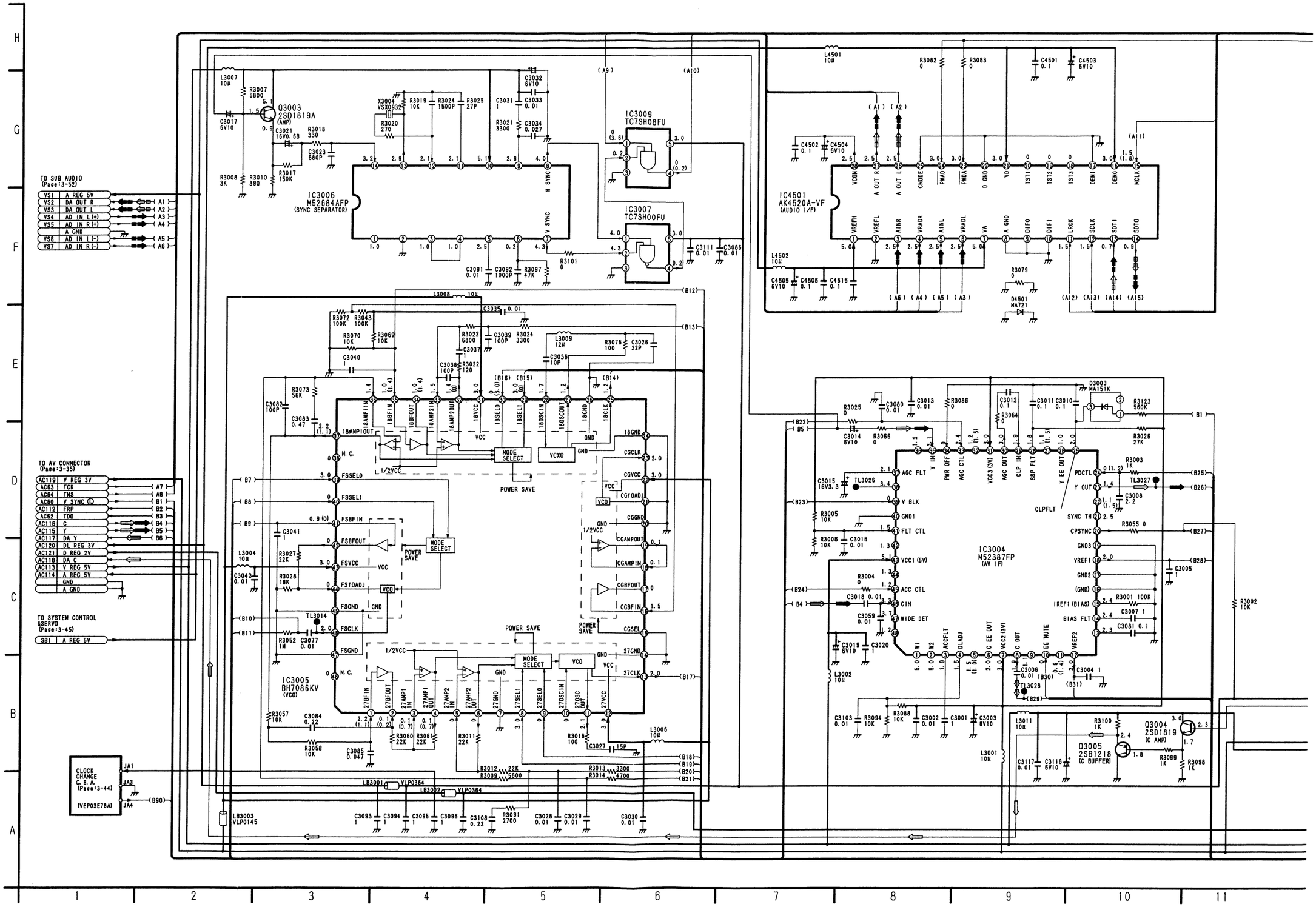
SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (Mini DV : SP MODE)

REF. NO.	Q6001																	
MODE	E	C	B															
STOP	3.7	3.7	3.6															
PLAY	3.7	3.7	3.6															
REC	3.7	3.7	3.6															
F.F	3.7	3.7	3.6															
REW	3.6	3.7	3.6															
REF. NO.	QR6001																	
MODE	E	C	B															
STOP	0	3.4	0															
PLAY	0	3.4	0															
REC	0	3.4	0															
F.F	0	3.4	0															
REW	0	3.4	0															

3-17. SUB AUDIO SECTION IN DIGITAL SCHEMATIC DIAGRAM



3-18. VIDEO 1 SECTION IN DIGITAL SCHEMATIC DIAGRAM



3—53

3—54

IC3001
T9P90EF
(DV I/O)

IC3001-157 REC/ PLAY
1.4Vp-p (20μsec.div)

IC3001-165 REC/ PLAY
0.7Vp-p (20μsec.div)

IC3001-3 PLAY
1.3Vp-p (20μsec.div)

IC3001-8 PLAY
0.6Vp-p (20μsec.div)

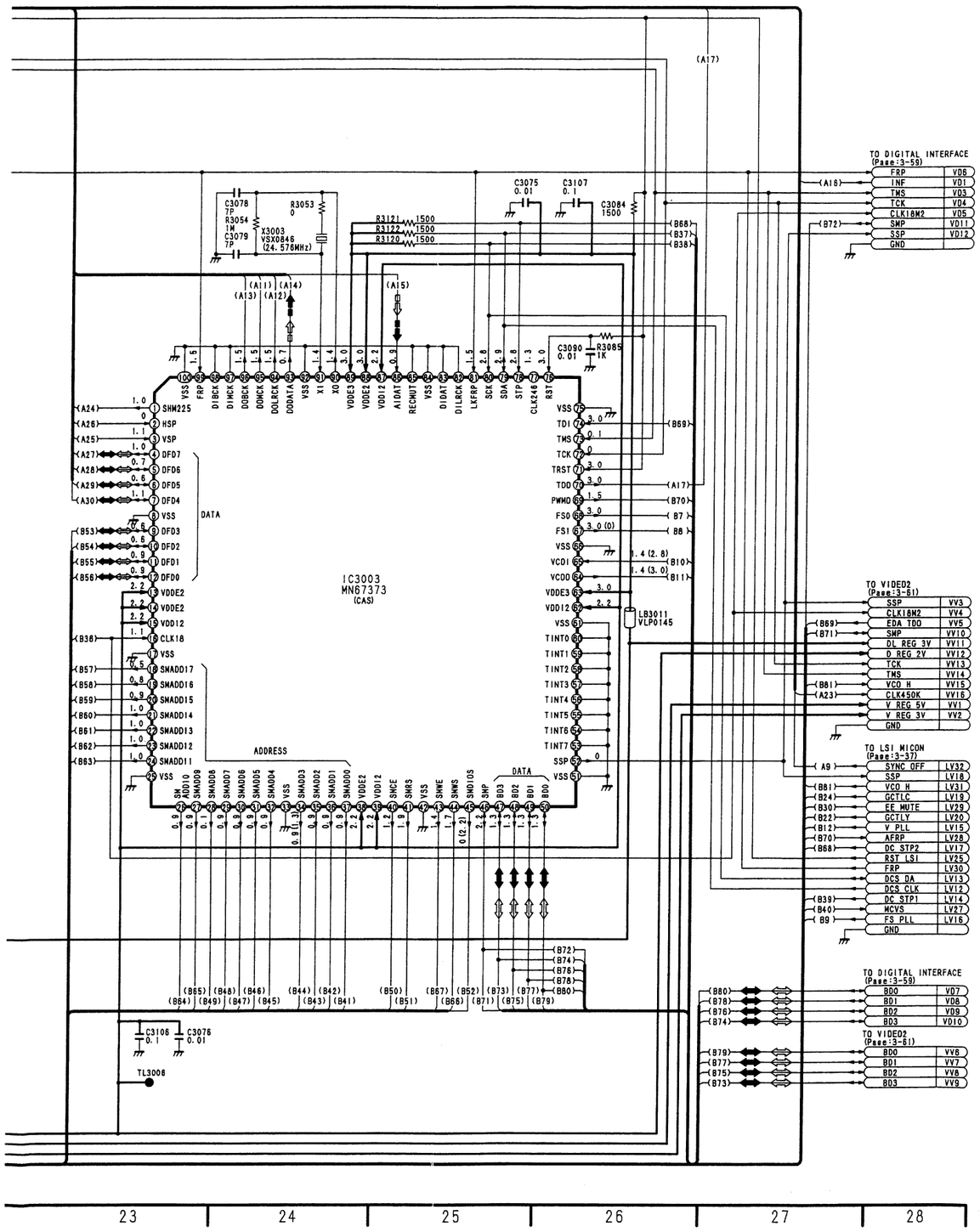
IC3002
UPD4890001GC
(SHUFFLE MEMORY)

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

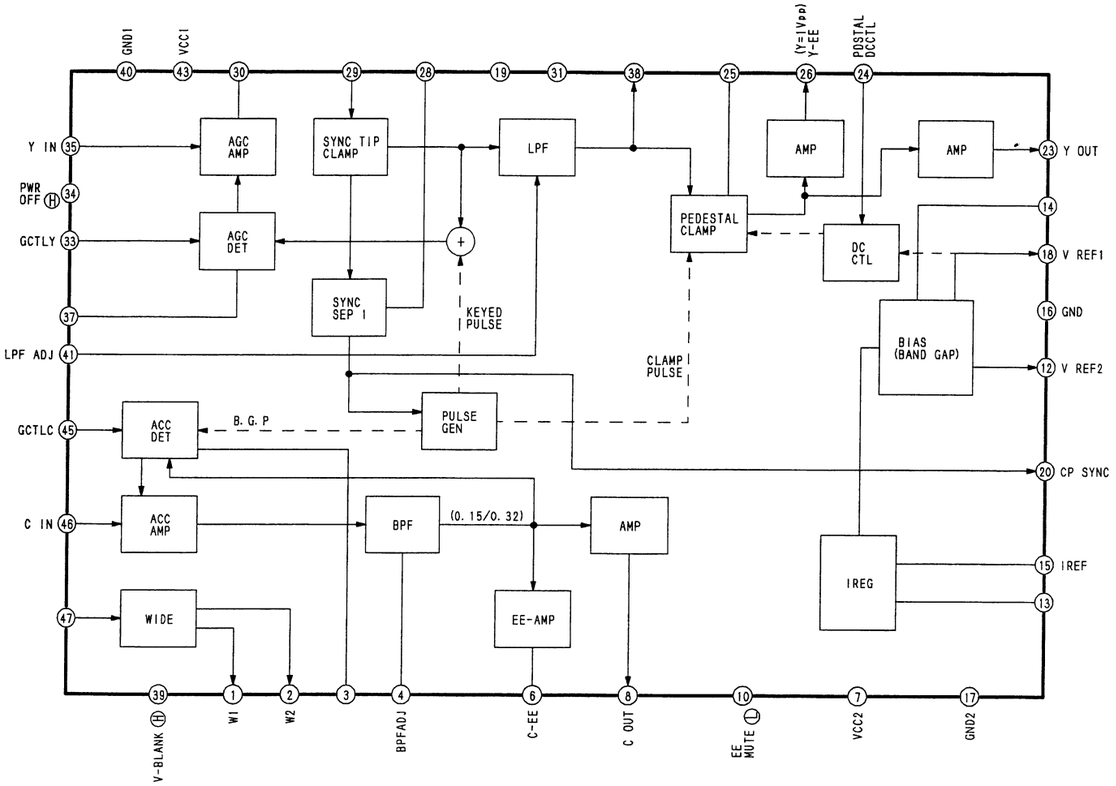
NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

:VIDEO SIGNAL PATH IN REC MODE
:VIDEO SIGNAL PATH IN PLAYBACK MODE
:AUDIO SIGNAL PTH IN REC MODE
:AUDIO SIGNAL PATH IN PLAYBACK MODE

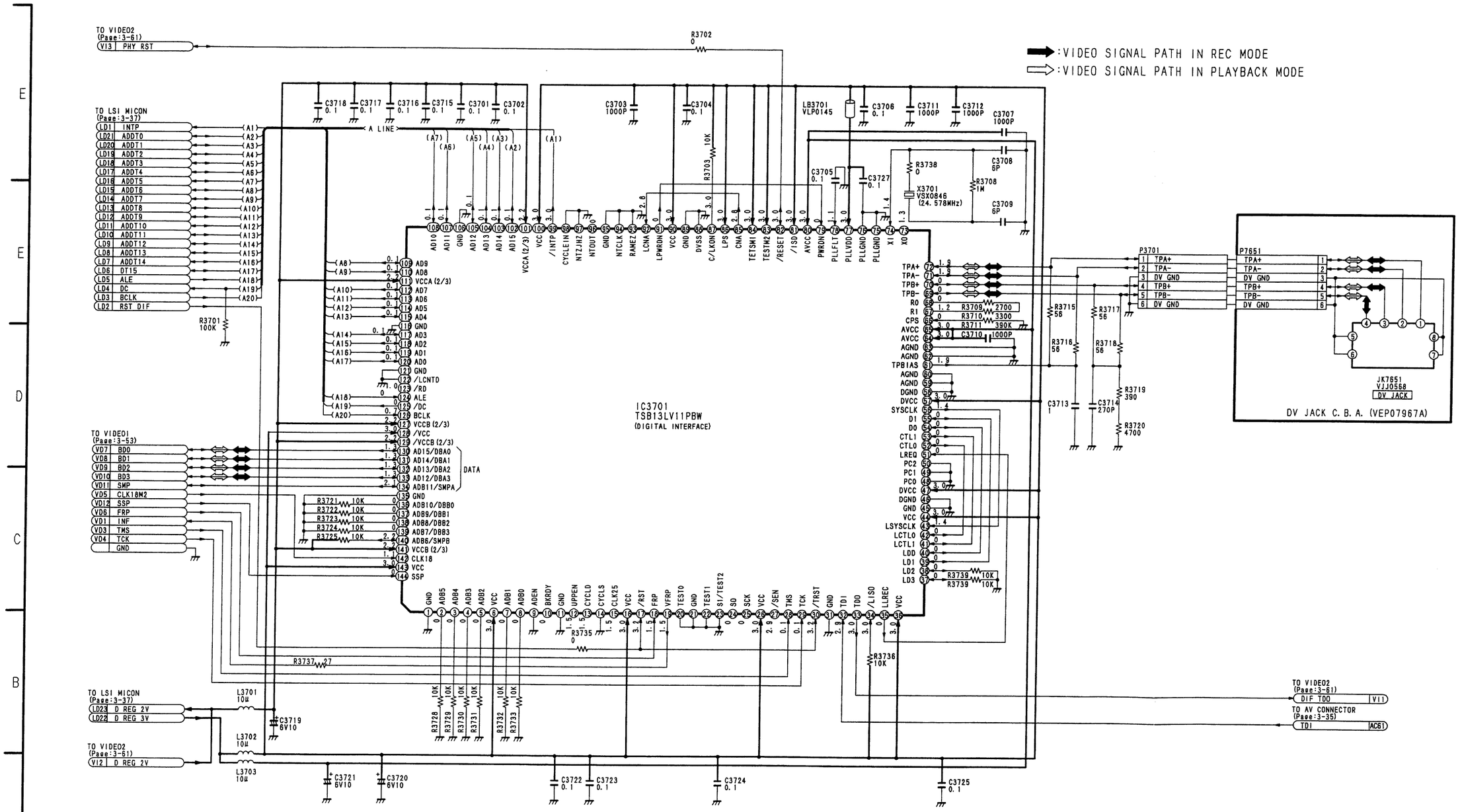


23 | 24 | 25 | 26 | 27 | 28

IC3004



3-19. DIGITAL INTERFACE SECTION IN DIGITAL, DV JACK SCHEMATIC DIAGRAMS

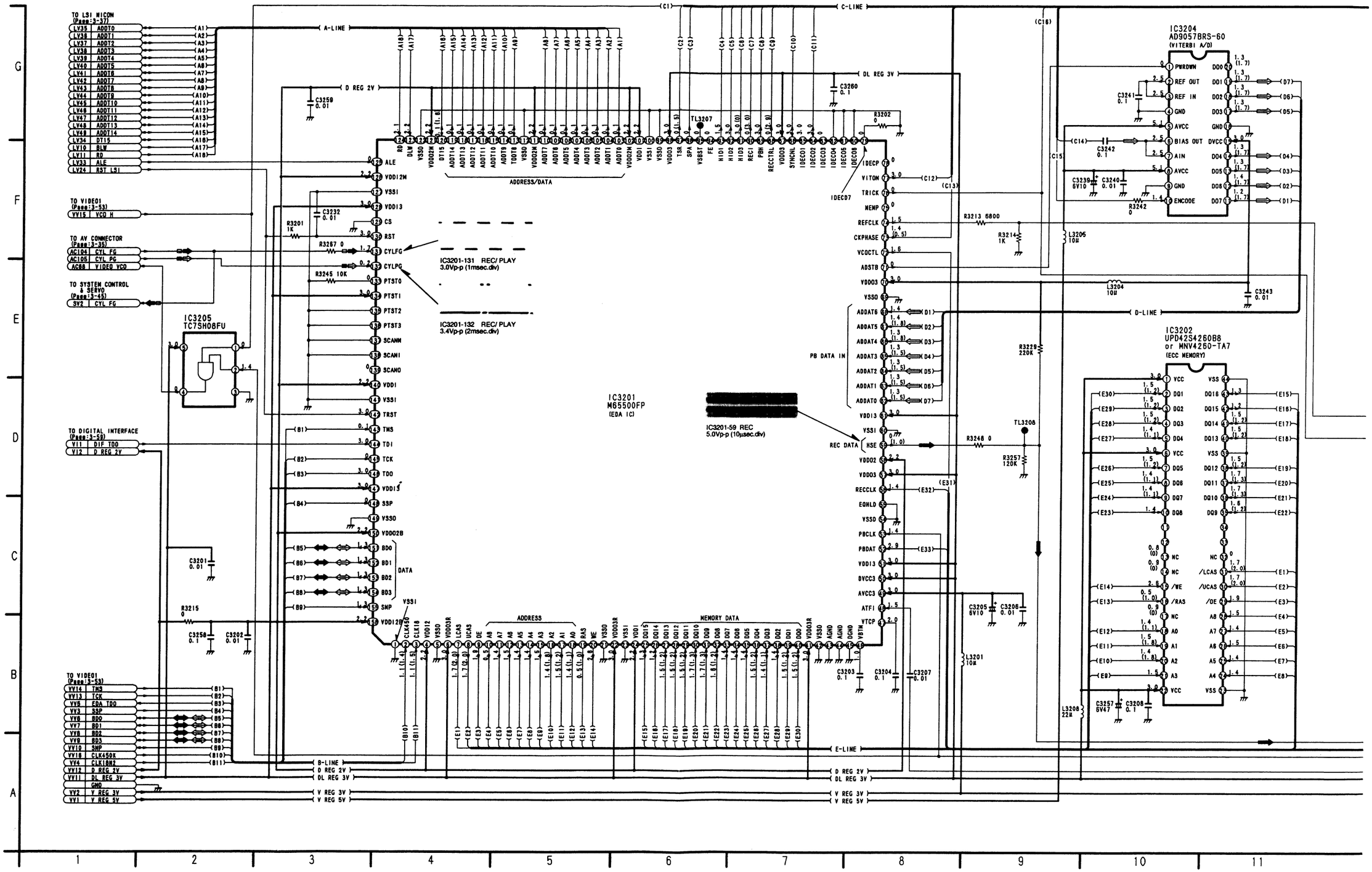


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

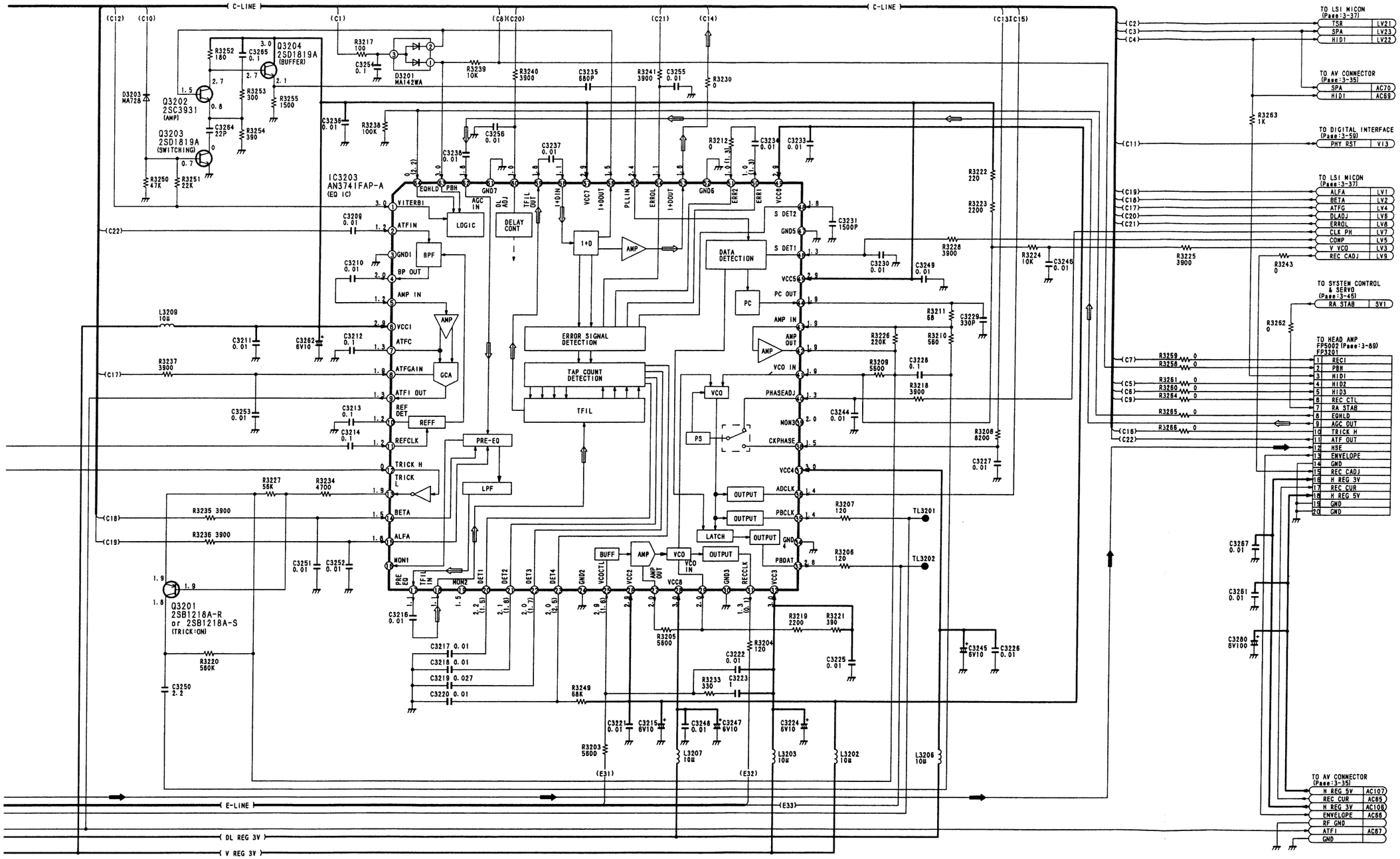
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

NOTE: DO NOT USE ANY PART NUMBER ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER APART, PLEASE REFER TO PARTS LIST.

3-20. VIDEO 2 SECTION IN DIGITAL SCHEMATIC DIAGRAM



:VIDEO SIGNAL PATH IN REC MODE
:VIDEO SIGNAL PATH IN PLAYBACK MODE
:CYLINDER SERVO SPEED LOOP
:CYLINDER SERVO PHASE LOOP

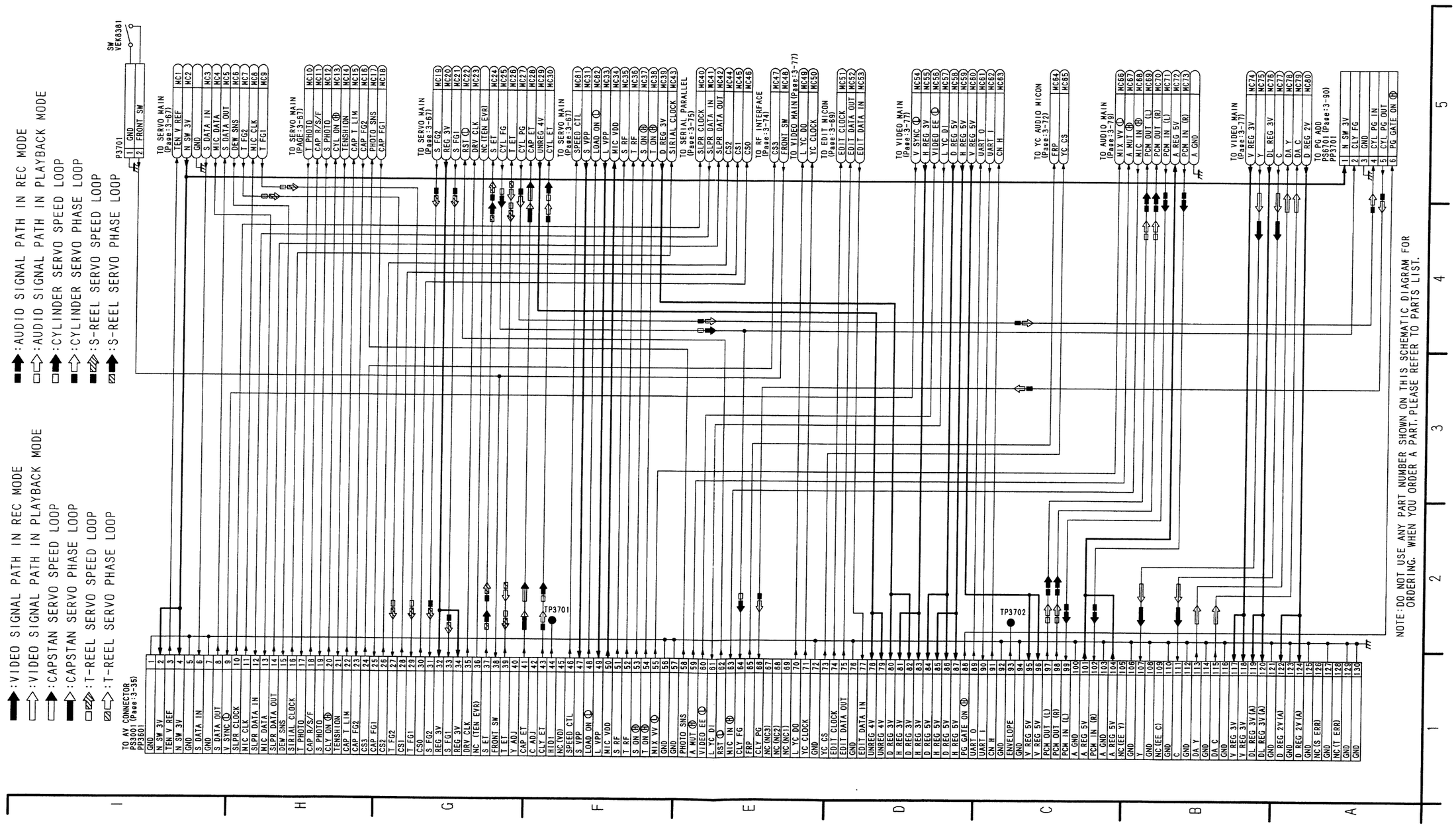


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

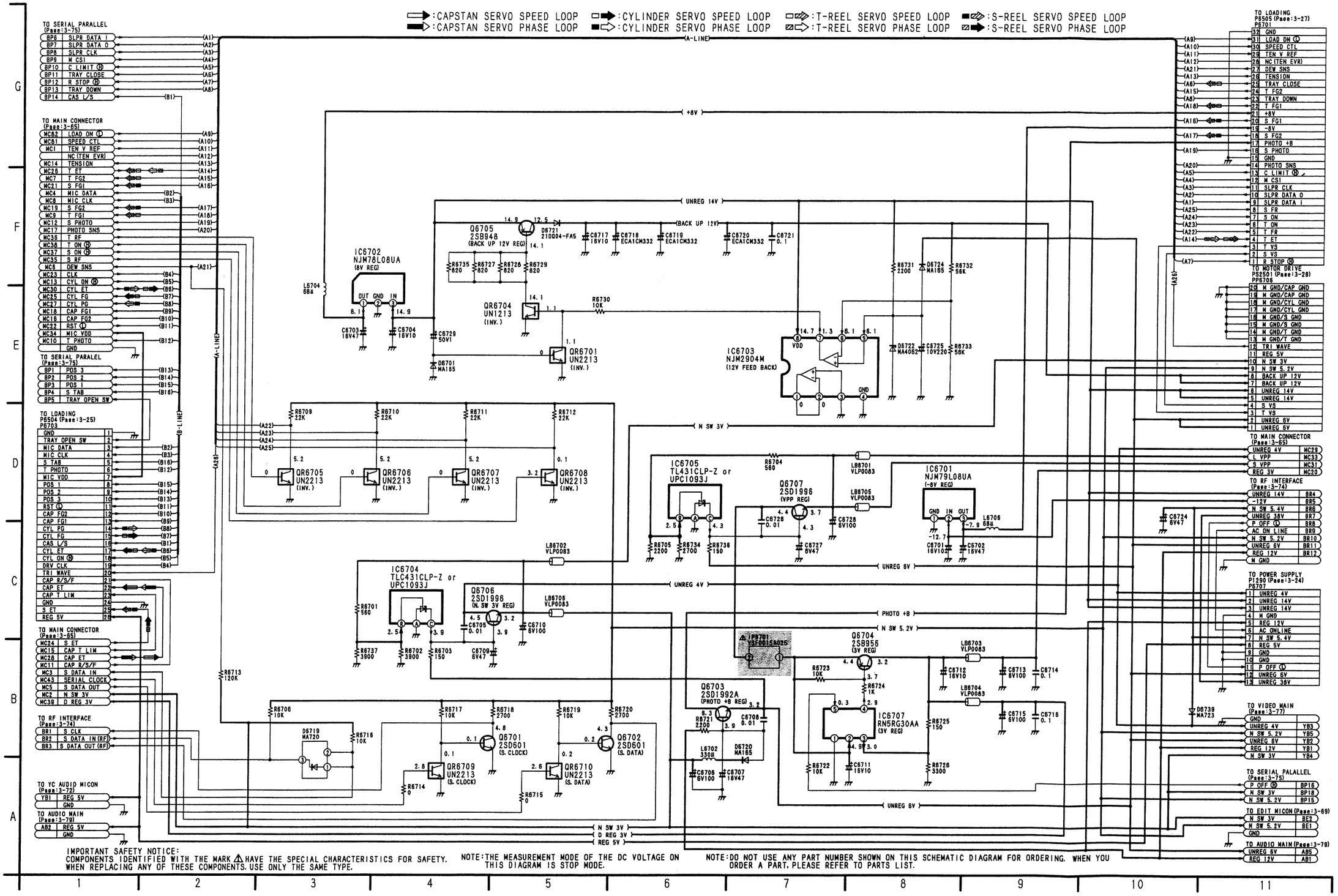
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

12 13 14 15 16 17 18 19 20 21 22

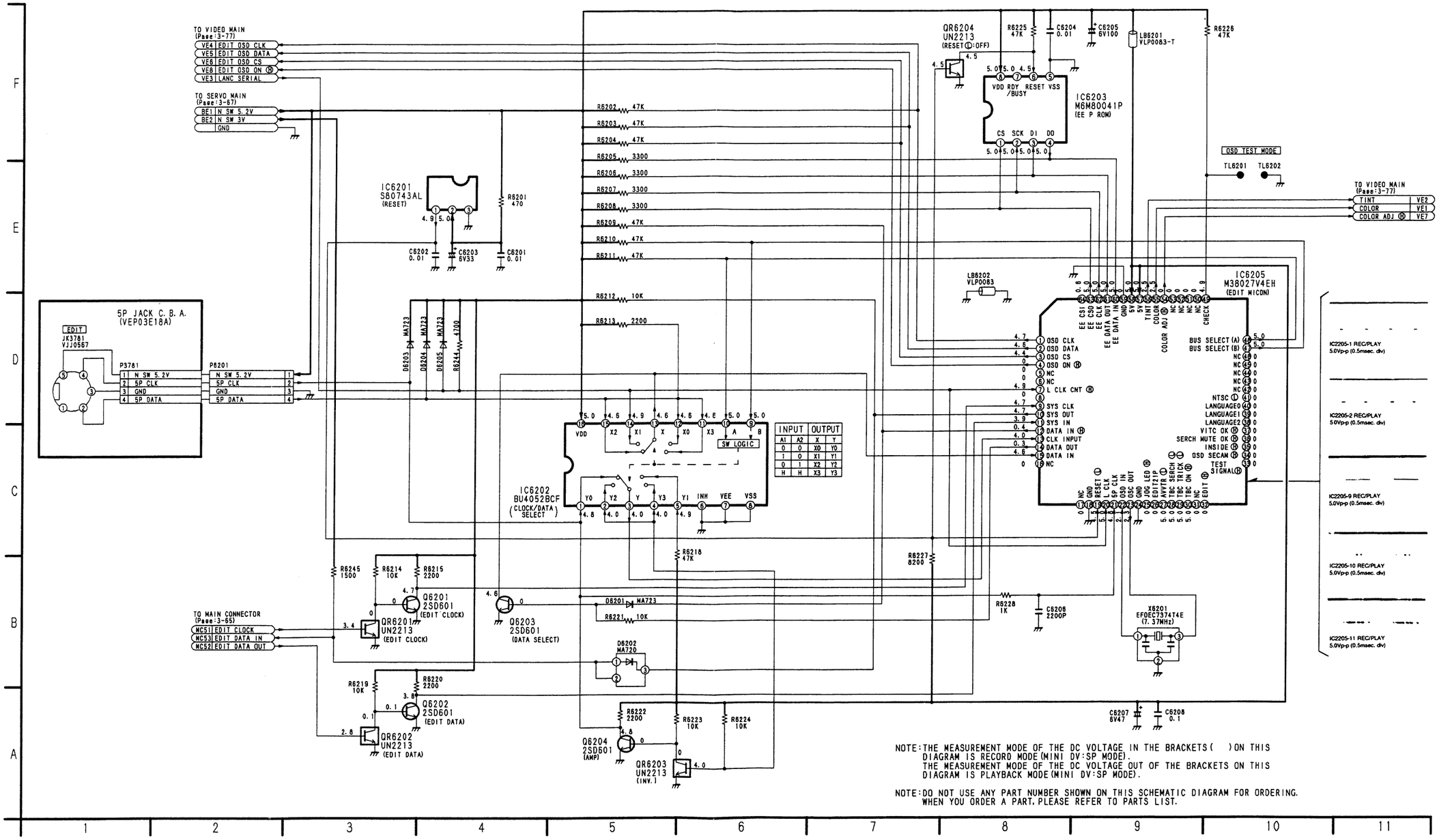
3-21. MAIN CONNECTOR SECTION IN MAIN SCHEMATIC DIAGRM



3-22. SERVO MAIN SECTION IN MAIN SCHEMATIC DIAGRAM



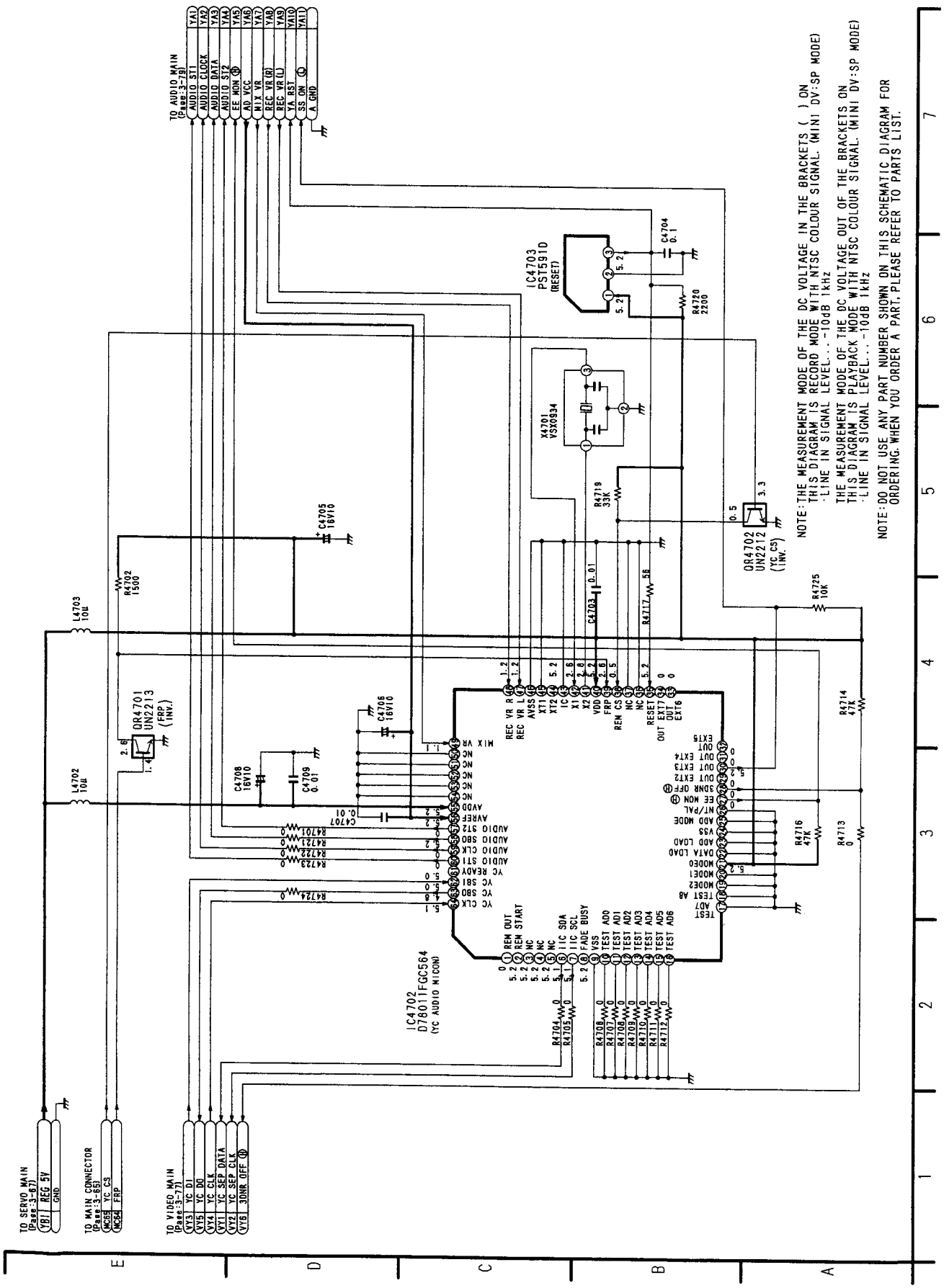
3-23. EDIT MICON SECTION IN MAIN SCHEMATIC DIAGRAM



IC6205 (M38027V4EH): EDIT MICON

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	OSD CLK	O	OSD CLOCK	33	NC	—	
2	OSD DATA	O	OSD DATA	34	NC	—	
3	OSD CS	O	OSD CHIP SELECT	35	INSIDE Ⓗ	—	EDIT OSD Ⓗ SIP Ⓛ
4	OSD ON Ⓗ	O	OSD ON Ⓗ	36	NC	—	
5	NC	—		37	NC	—	
6	NC	—		38	NC	—	
7	L CLK CNT Ⓗ	I	LANC SERIAL COUNT	39	NC	—	
8	NC	—		40	NC	—	
9	SYS CLK	I	SYSCON SERIAL CLOCK	41	NTSC Ⓛ		NTSC Ⓛ
10	SYS OUT	O	SYSCON SERIAL DATA OUT	42	NC	—	
11	SYS IN	I	SYSCON SERIAL DATA IN	43	NC	—	
12	DATA IN Ⓗ	O	DATA IN Ⓗ	44	NC	—	
13	CLK INPUT	I	SERIAL CLOCK	45	NC	—	
14	DATA OUT	O	SERIAL DATA OUT	46	NC	—	
15	DATA IN	I	SERIAL DATA IN	47	BUS SELECT A	O	SERIAL SELECT
16	NC	—		48	BUS SELECT B	O	SERIAL SELECT
17	NC	—		49	TL6201	—	
18	GND	—		50	NC	—	
19	RESET Ⓛ	I	RESET Ⓛ	51	NC	—	
20	L CLK	I	LANC CLOCK	52	NC	—	
21	5P CLK	I	5P CLOCK	53	NC	—	
22	OSD IN	I	MICON CLOCK	54	COLOR ADJ Ⓗ	O	COLOR ADJUSTMENT Ⓗ
23	OSD OUT	O	MICON CLOCK	55	COLOR	O	COLOR
24	GND	—		56	TINT	O	TINT
25	NC	—		57	5V	I	
26	NC	—		58	5V	I	
27	NC	—		59	GND	—	
28	NC	—		60	EE DATA IN	I	E^2 PROM DATA IN
29	NC	—		61	EE DATA OUT	O	E^2 PROM DATA OUT
30	NC	—		62	EE CLK	O	E^2 PROM SERIAL CLOCK
31	NC	—		63	EE CS	O	E^2 PROM CHIP SELECT
32	NC	—		64	NC	—	

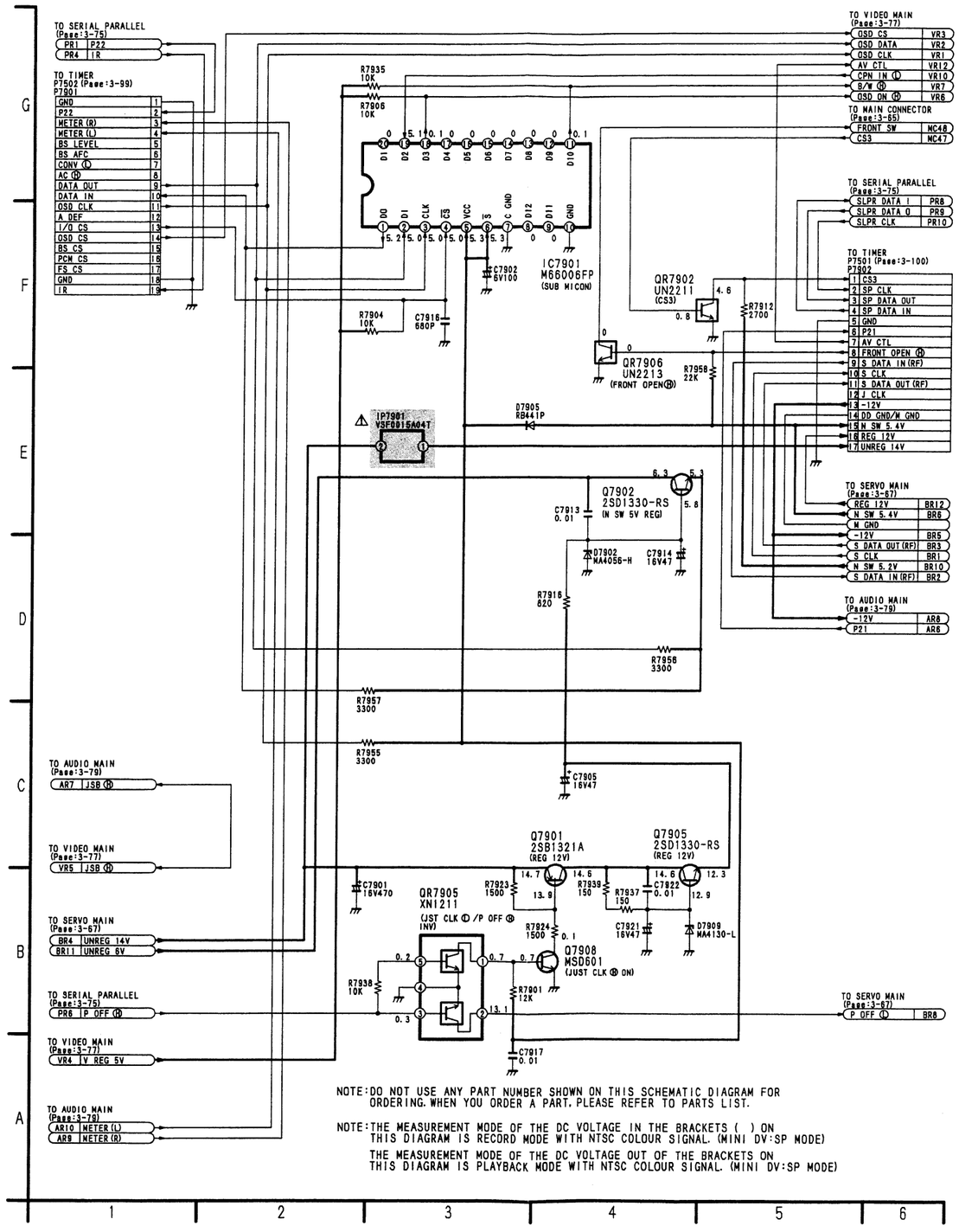
3-24. Y / C AUDIO MICON SECTION IN MAIN SCHEMATIC DIAGRAM



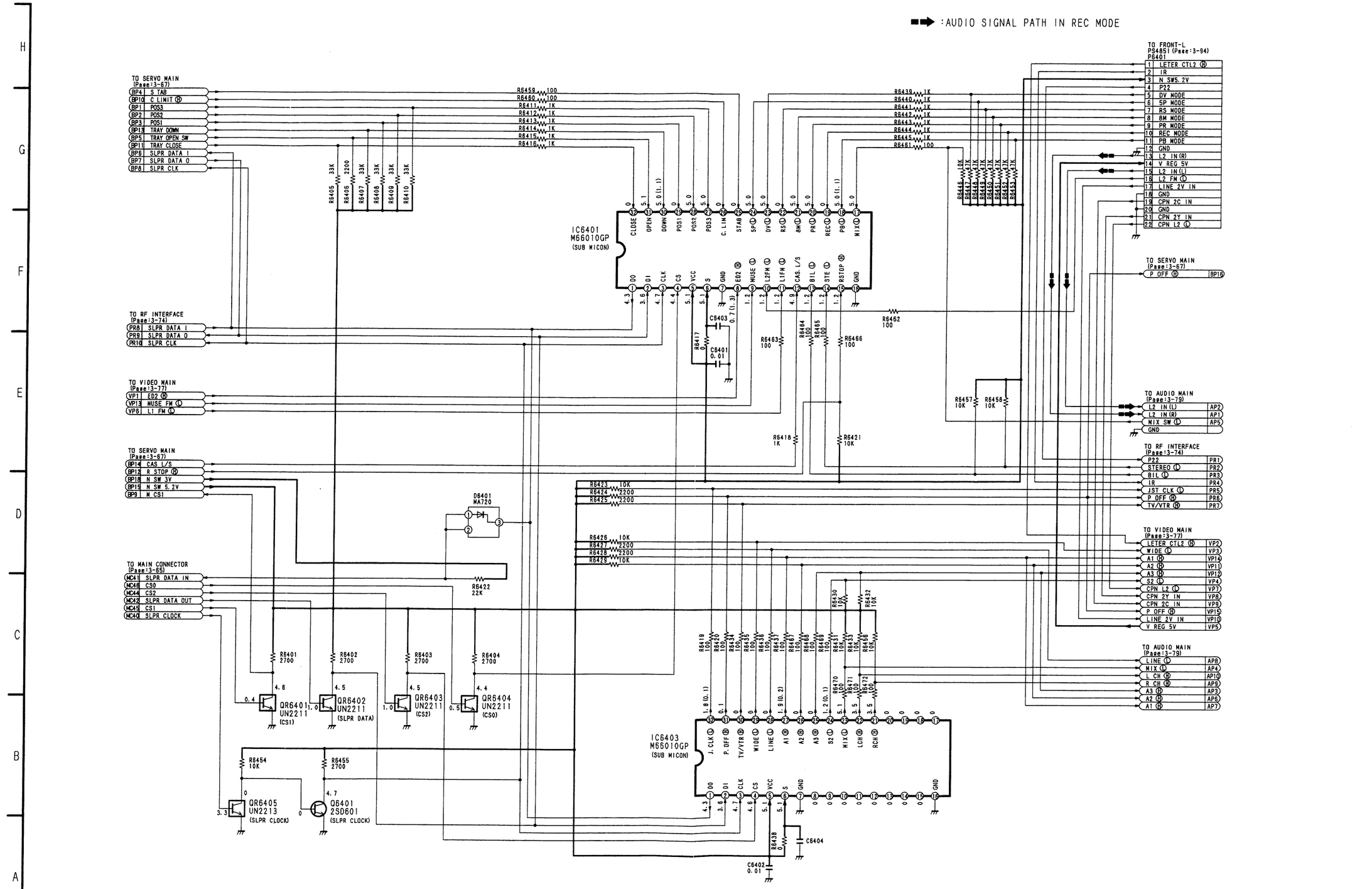
IC4702 (D78011FGC564): YC AUDIO MICON

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	REM OUT	O	REMOCON SIGNAL OUT	33	NC	—	
2	NC	—		34	NC	—	
3	NC	—		35	RESET	I	RESET
4	NC	—		36	GND	—	
5	NC	—		37	GND	—	
6	IIC SDA	I	IIC SERIAL DATA	38	REM CS	I	CONTROL SERIAL CS
7	IIC SCL	I	IIC SERIAL DATA	39	FRP	I	FRAME SINCHRO PALUS
8	NC	—		40	VDD	I	POWER
9	VSS	—	GND	41	X2	O	
10	GND	—		42	X1	I	
11	GND	—		43	GND	—	
12	GND	—		44	NC	—	
13	GND	—		45	GND	—	
14	GND	—		46	GND	—	
15	GND	—		47	REC VR L	I	REC VR (L)
16	GND	—		48	REC VR R	I	REC VR (R)
17	GND	—		49	MIX VR	I	MIX VR
18	GND	—		50	GND	—	
19	GND	—		51	GND	—	
20	GND	—		52	GND	—	
21	MODE 0	I	MODE SELECT 0	53	GND	—	
22	GND	—		54	GND	—	
23	GND	—		55	AVDD	I	POWER
24	GND	—		56	AVREF	I	AV REF
25	GND	—		57	AUDIO ST2	O	AUDIO STOROBE 2
26	GND	—		58	AUDIO SBO	O	AUDIO SERIAL OUT
27	EE MON Ⓗ	O	EE MONITOR Ⓗ	59	AUDIO CLK	O	AUDIO CLOCK
28	3 DNR OFF Ⓗ	O	THREE DIMENSIONS NR OFF Ⓗ	60	AUDIO ST1	O	AUDIO STOROBE 1
29	NC	—		61	NC	—	
30	SS ON Ⓛ	O	SERACH SOUND ON Ⓛ	62	YC SBI	I	YC SERIAL BUS IN
31	NC	—		63	YC SBO	O	YC SERIAL BUS OUT
32	NC	—		64	YC CLK	I	YC CLOCK

3-25. RF INTERFACE SECTION IN MAIN, 5P JUCK SCHEMATIC DIAGRAMS



3-26. SERIAL PARALLEL SECTION IN MAIN SCHEMATIC DIAGRAM

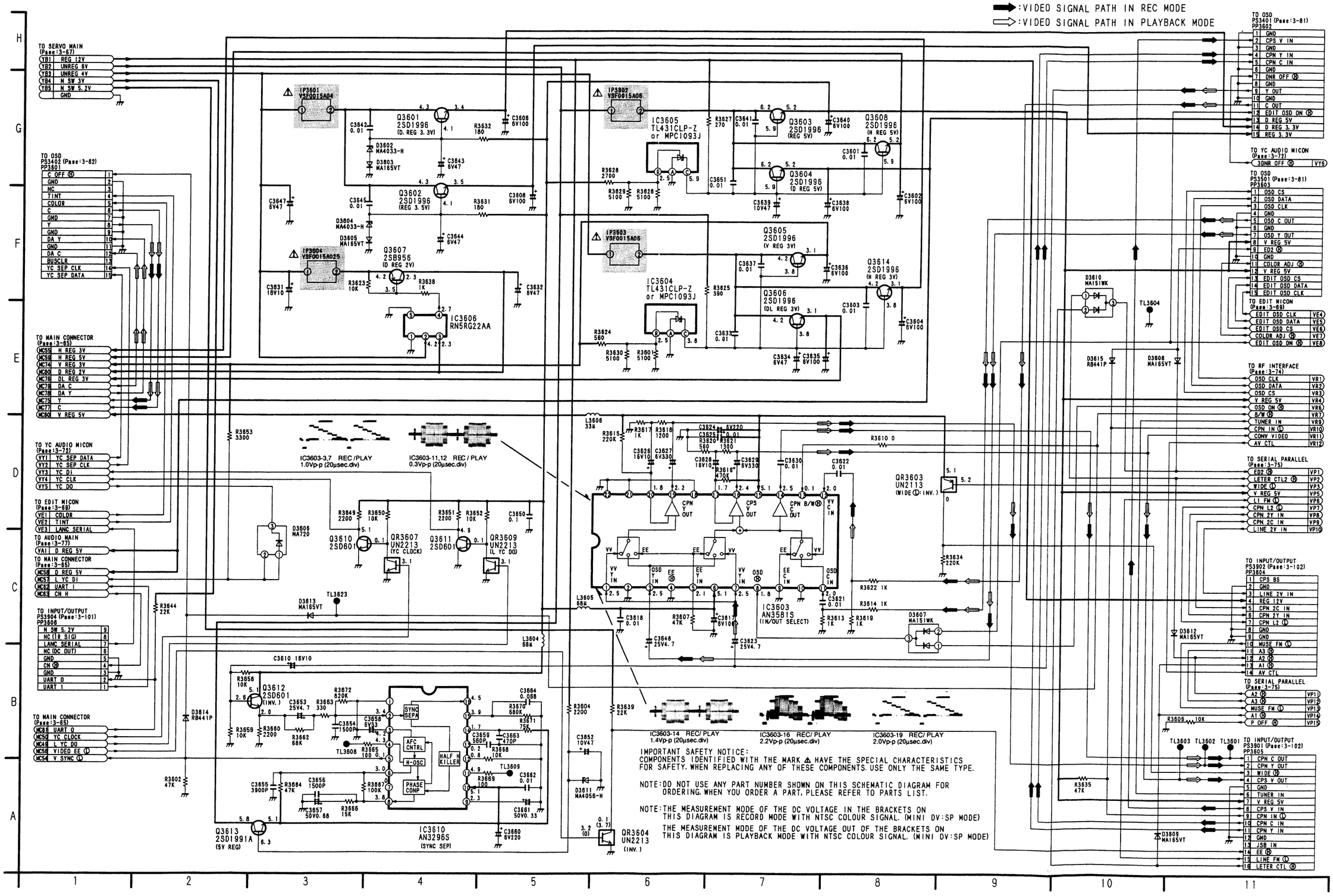


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE) · LINE IN SIGNAL LEVEL... -10dB 1kHz

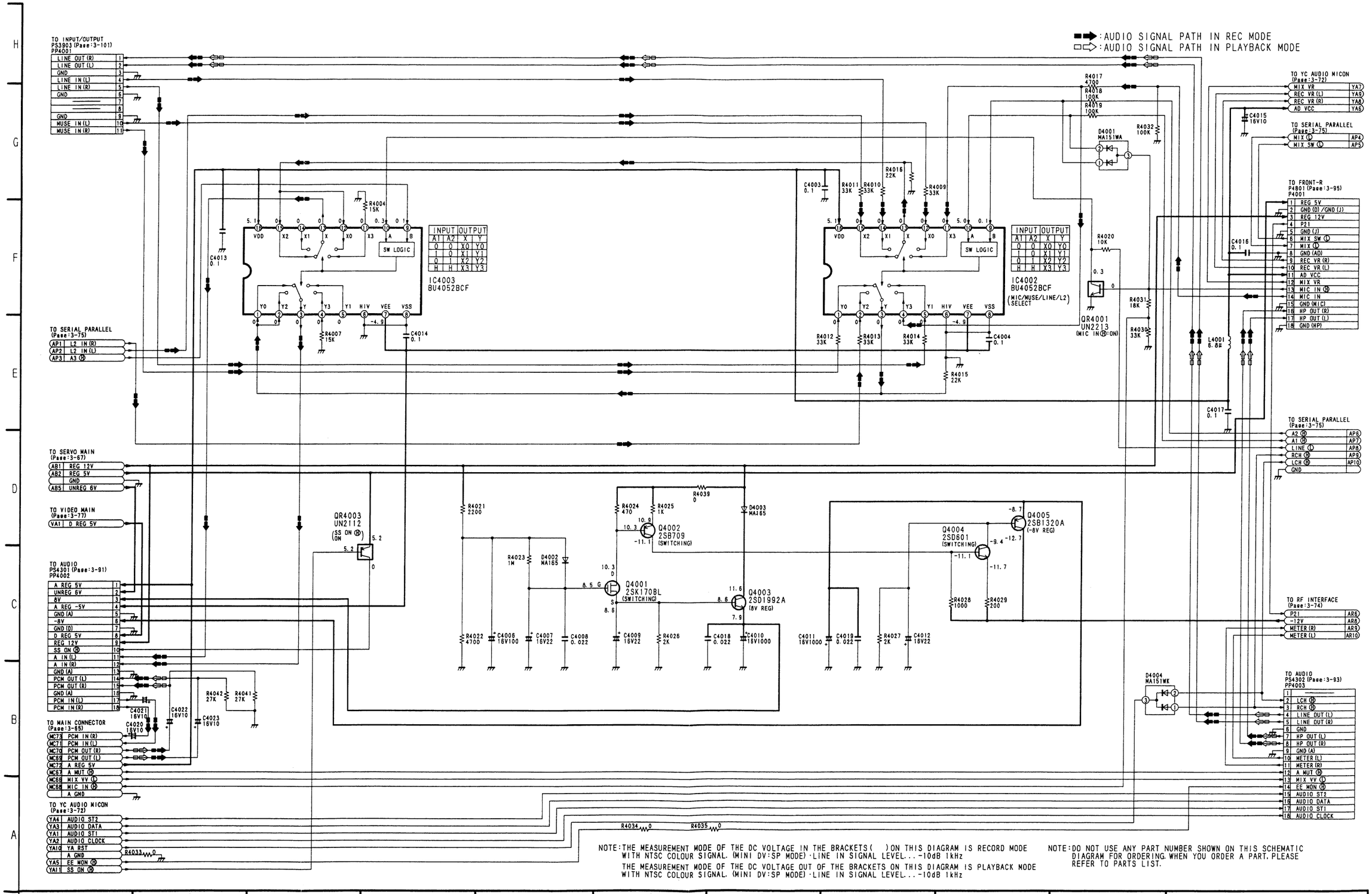
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE) · LINE IN SIGNAL LEVEL... -10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-27. VIDEO MAIN SECTION IN MAIN SCHEMATIC DIAGRAM



3-28. AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM

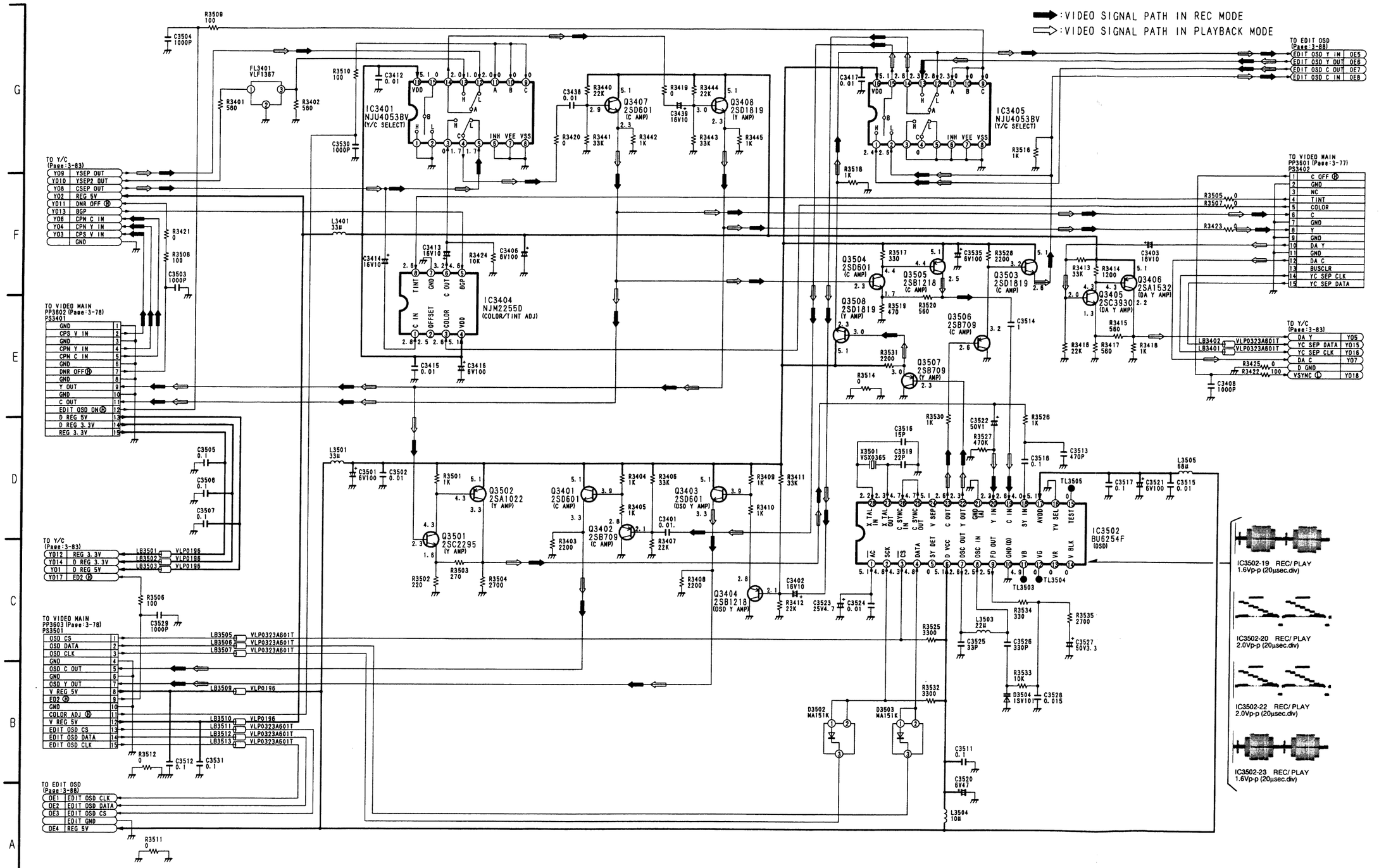


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)·LINE IN SIGNAL LEVEL...-10dB 1kHz

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)·LINE IN SIGNAL LEVEL...-10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-29. OSD SECTION IN ANALOG SCHEMATIC DIAGRAM

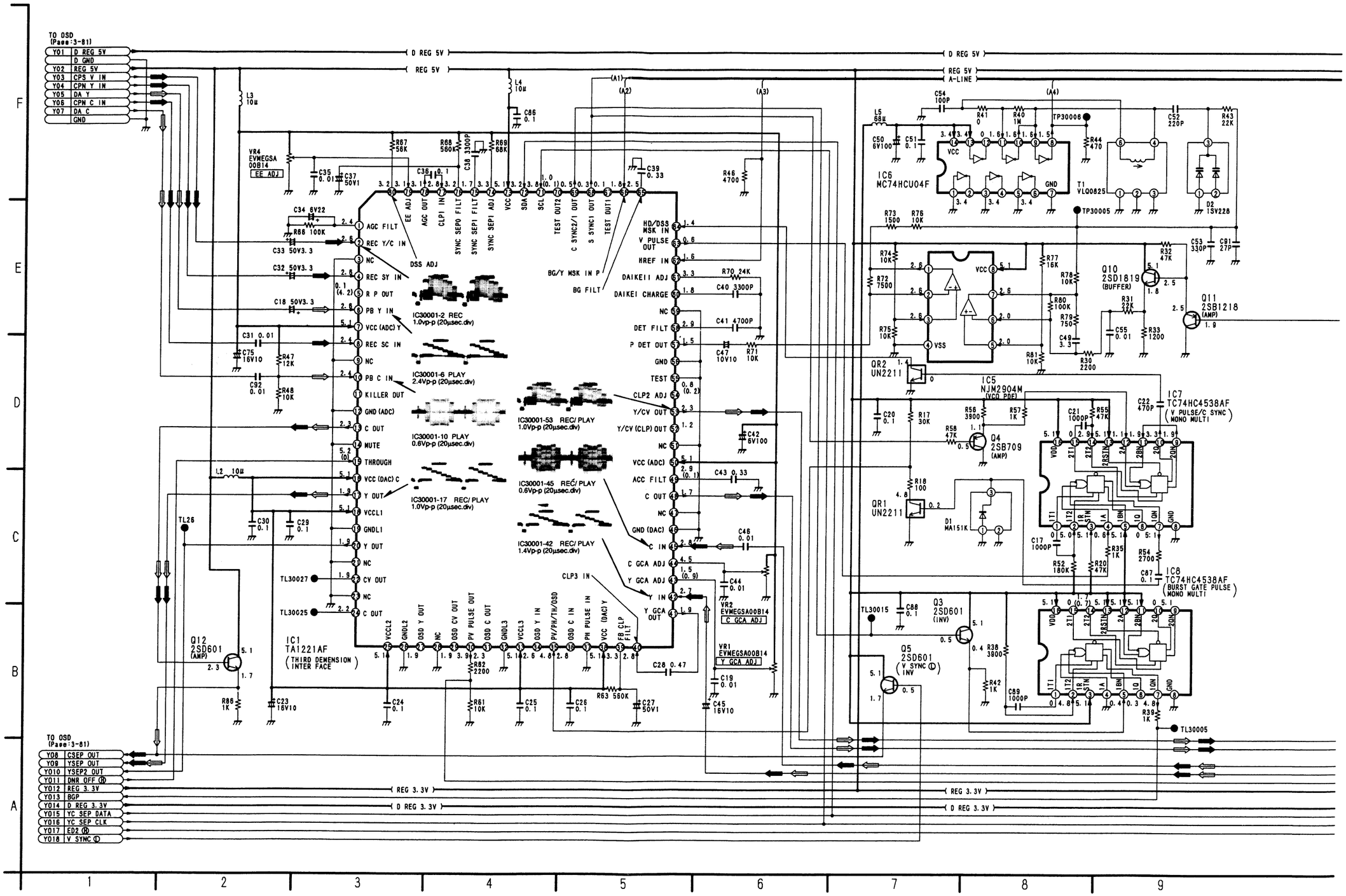


NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

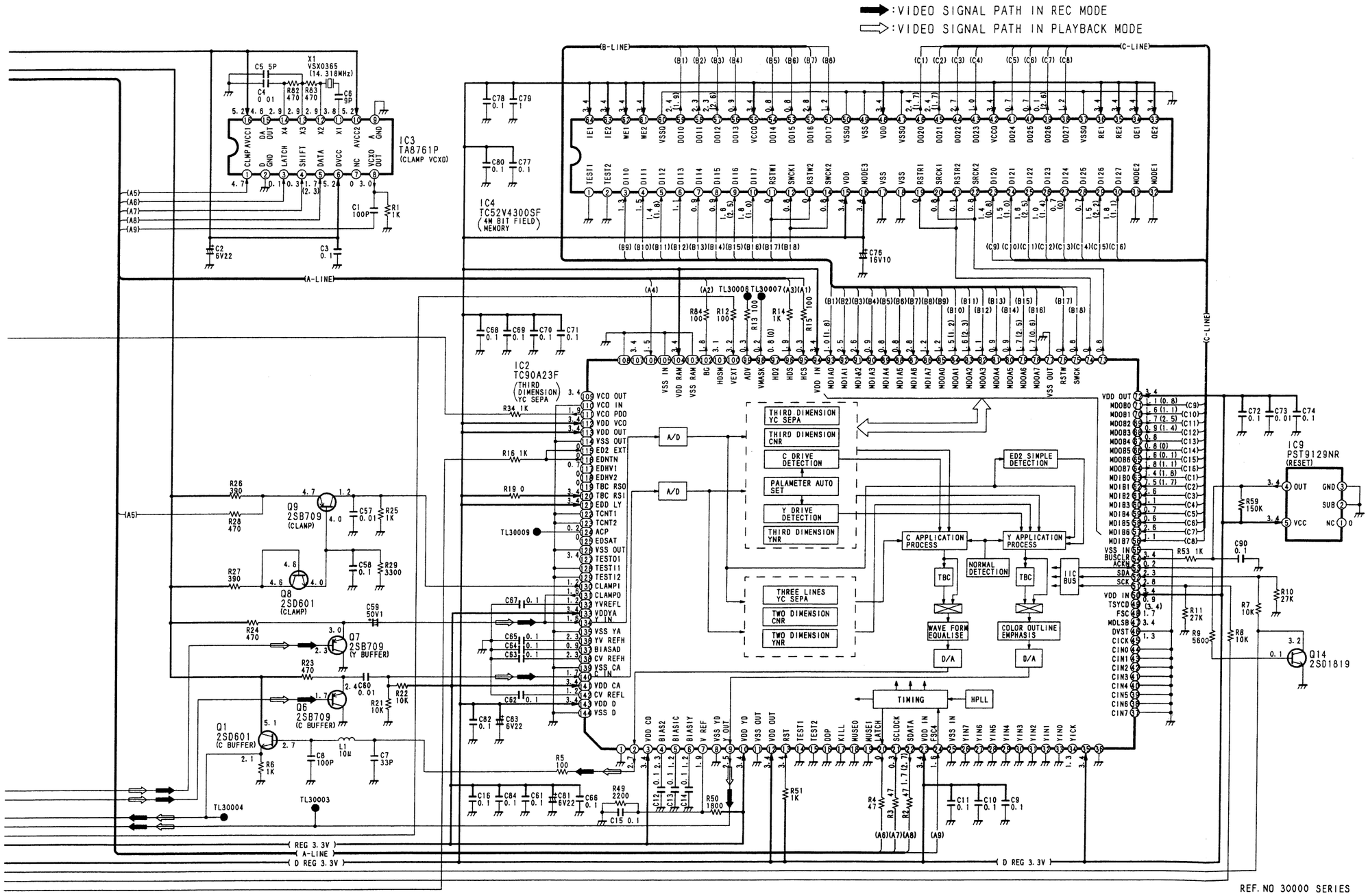
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-30. Y / C SECTION IN ANALOG SCHEMATIC DIAGRAM



3—83 3—84



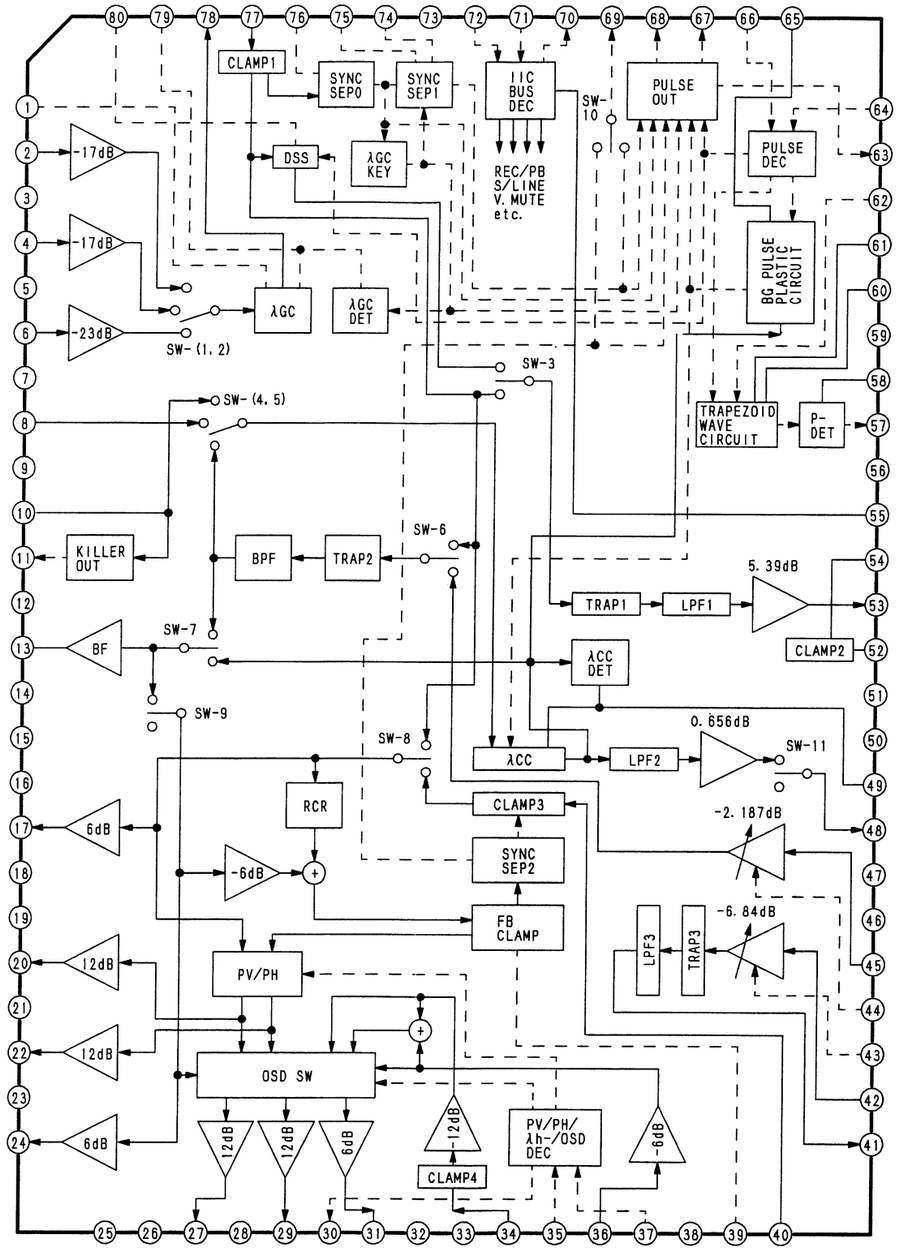
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (MINI DV:SP MODE)

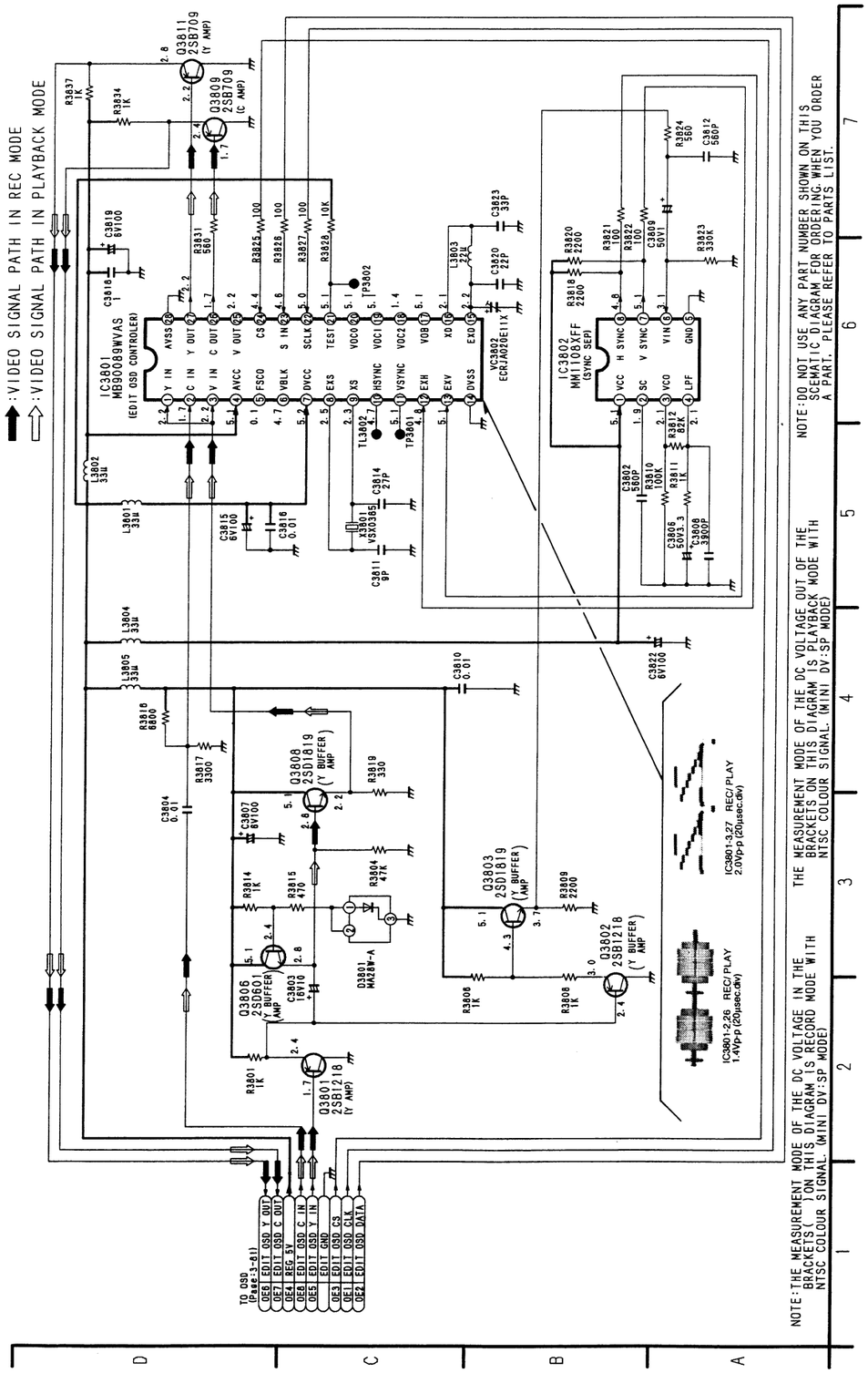
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER APART, PLEASE REFER TO PARTS LIST.

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17

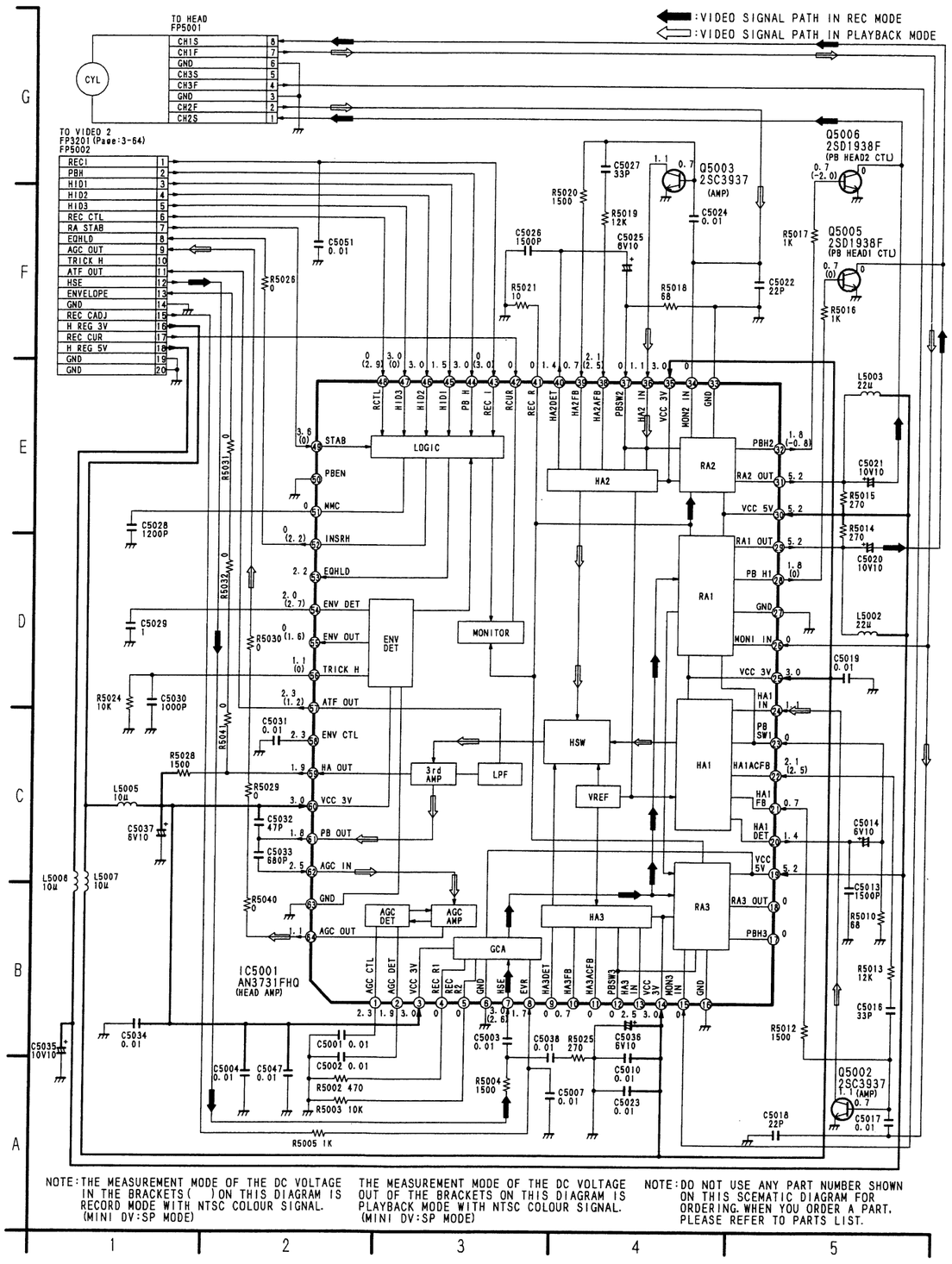
IC30001



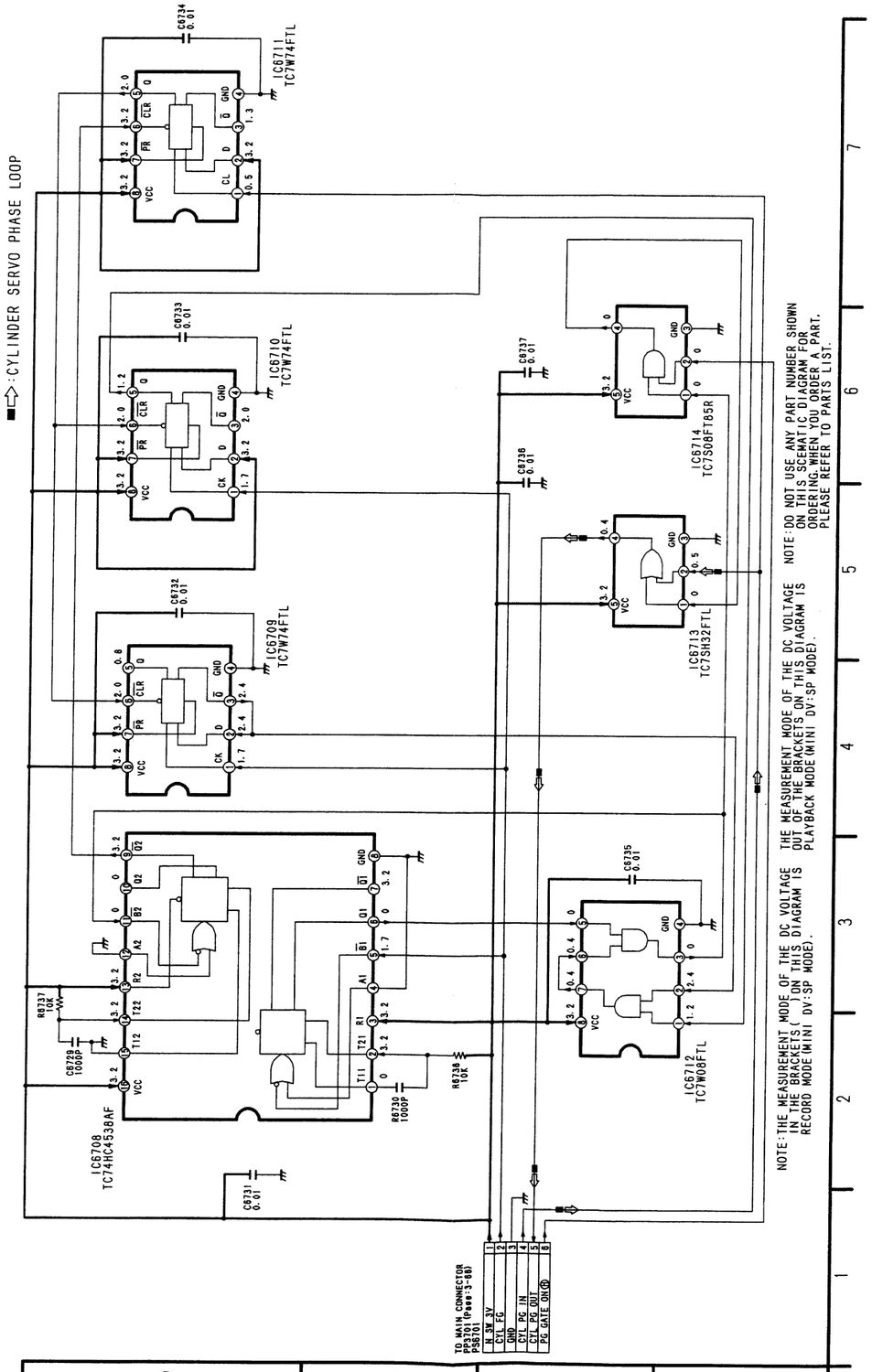
3-31. EDIT OSD IN ANALOG SCHEMATIC DIAGRAM



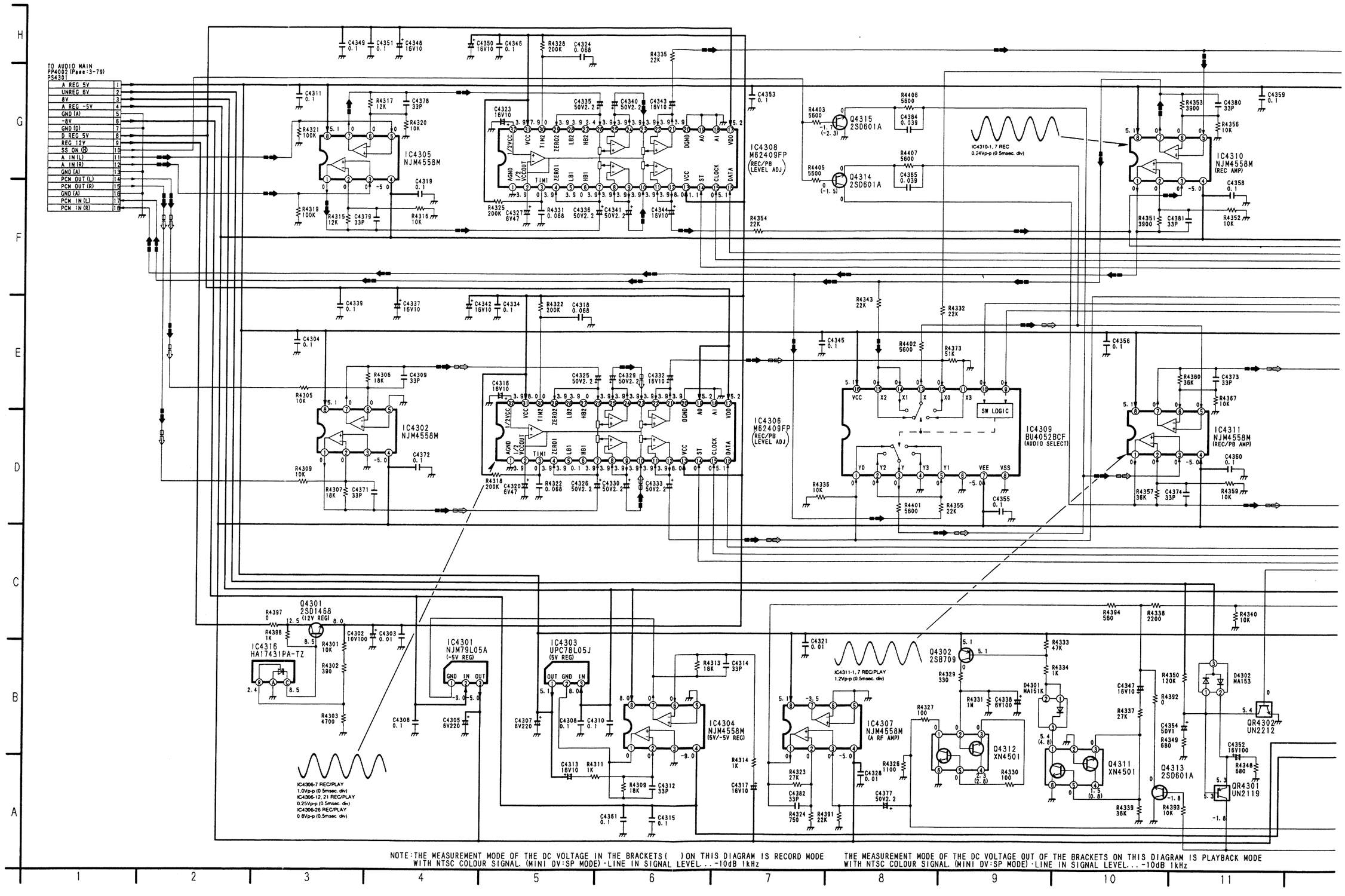
3-32. HEAD AMP SCHEMATIC DIAGRAM



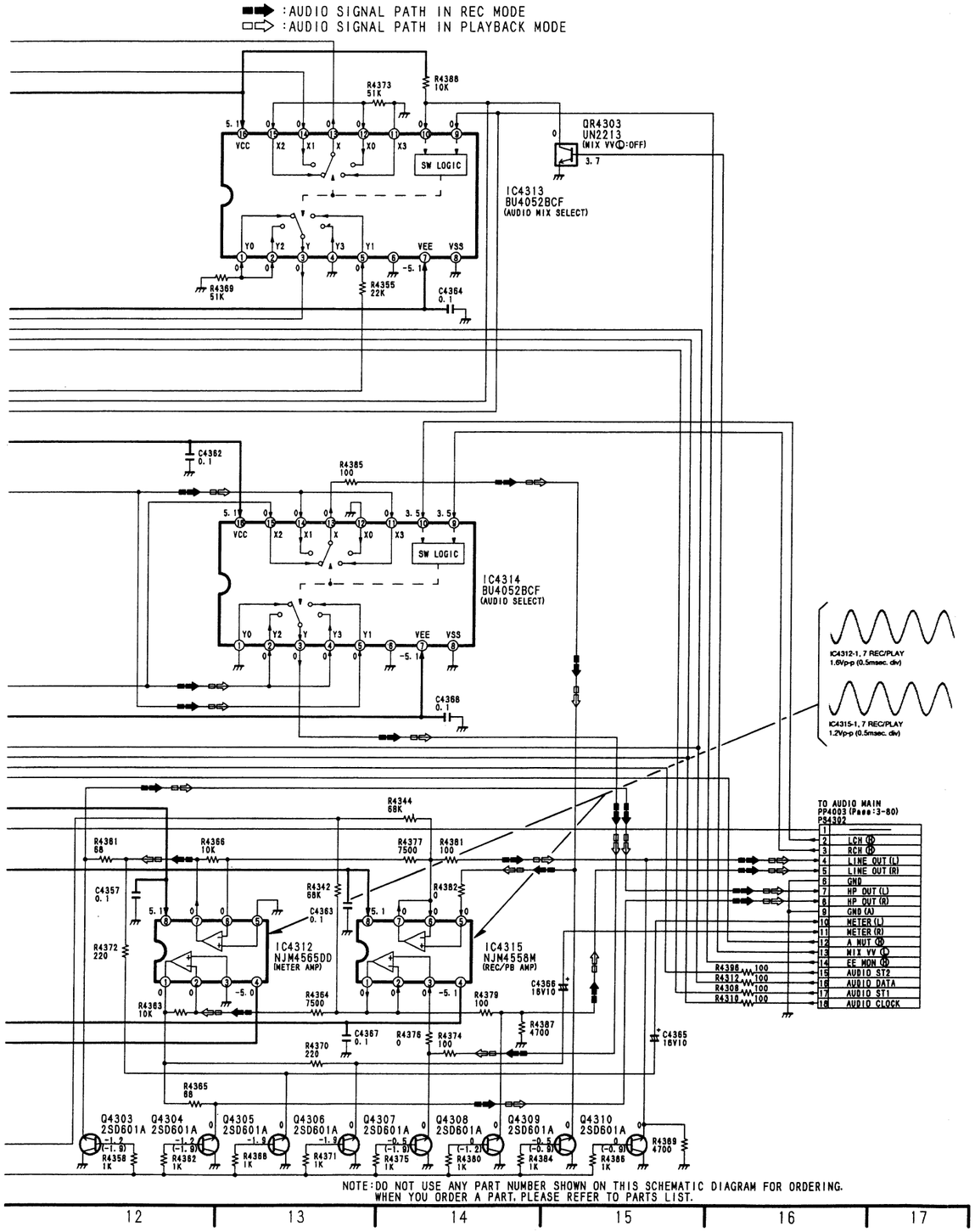
3-33. PG ADD SCHEMATIC DIAGRAM

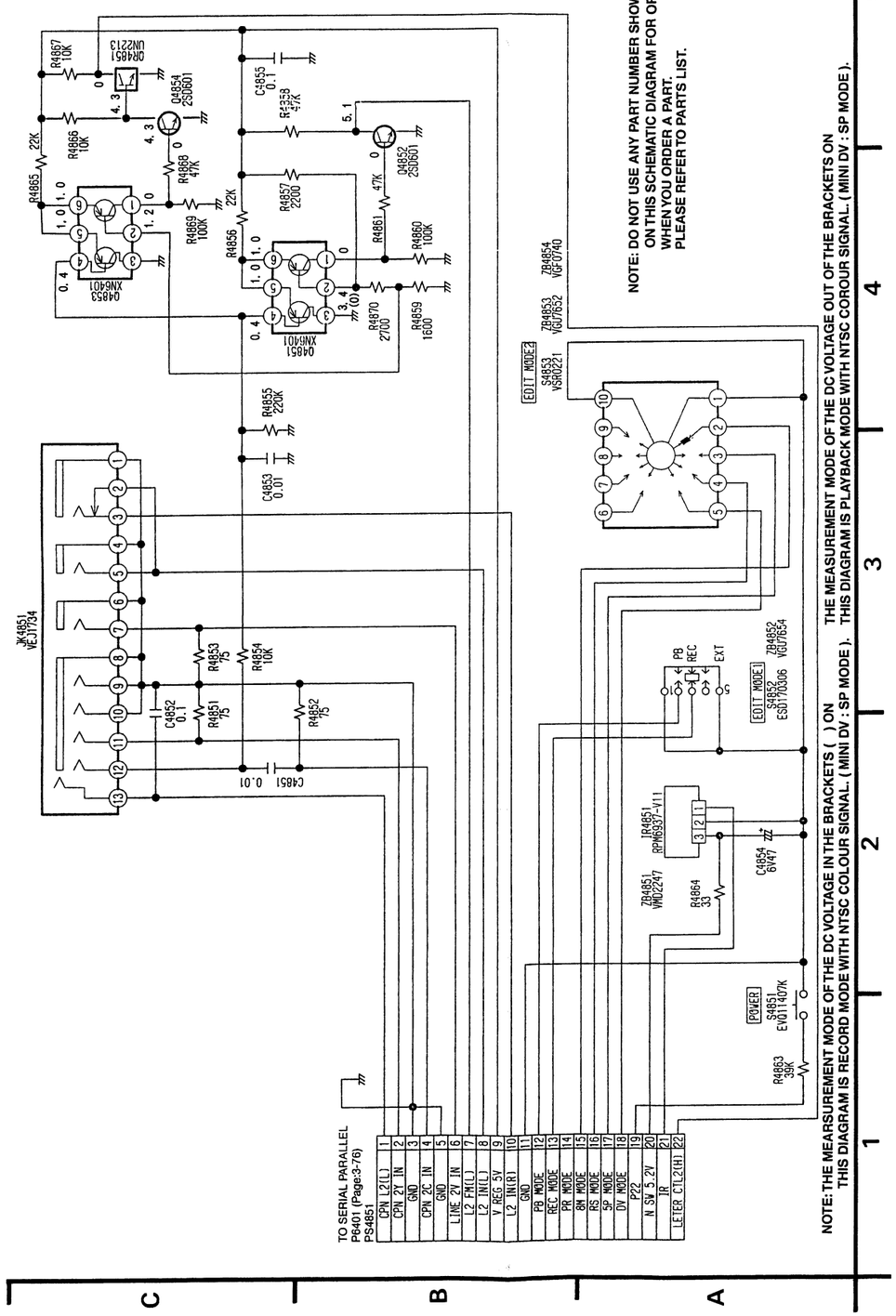


3-34. AUDIO SCHEMATIC DIAGRAM

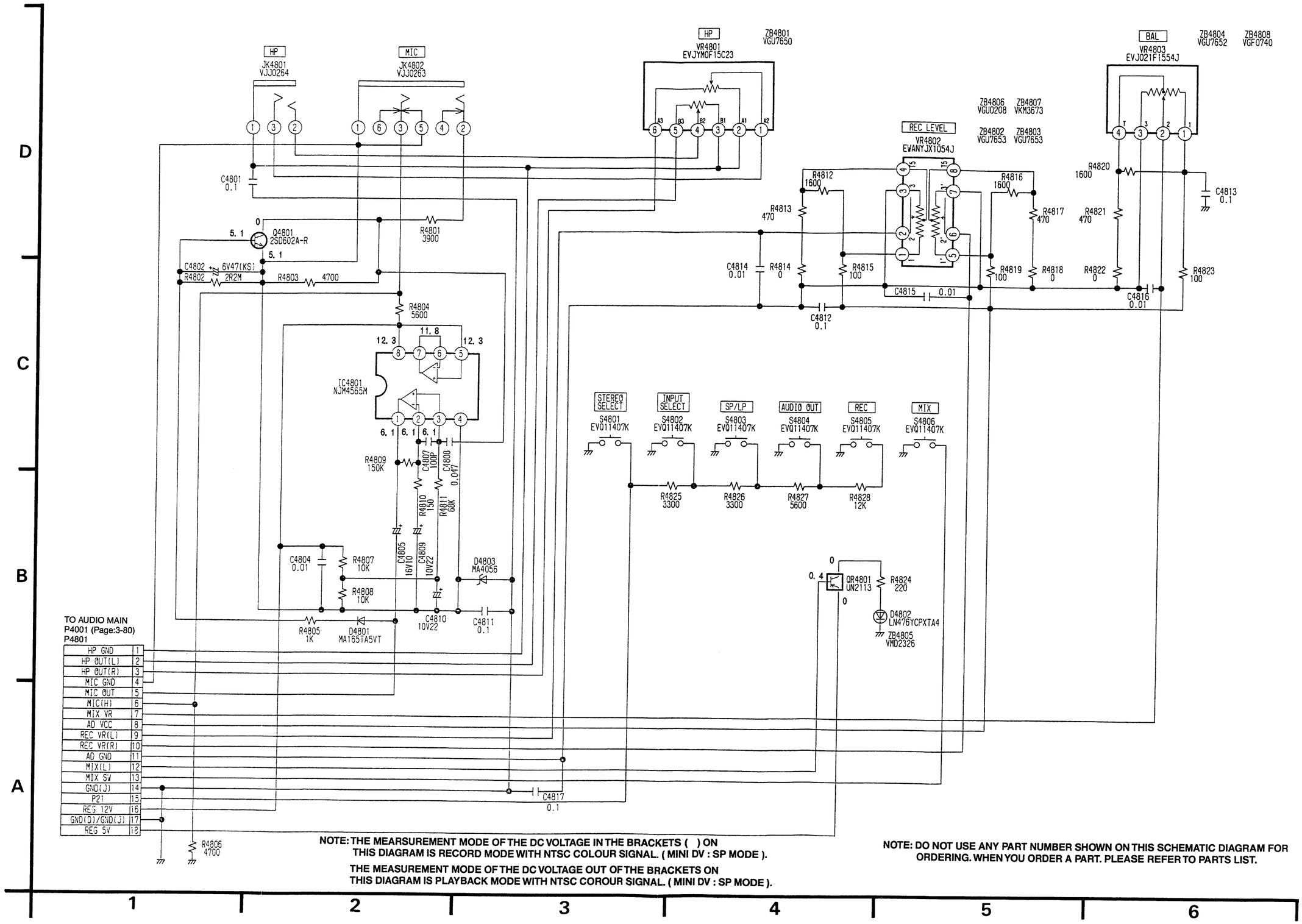


3-35. FRONT (L) SCHEMATIC DIAGRAM





3-36. FRONT (R) SCHEMATIC DIAGRAM

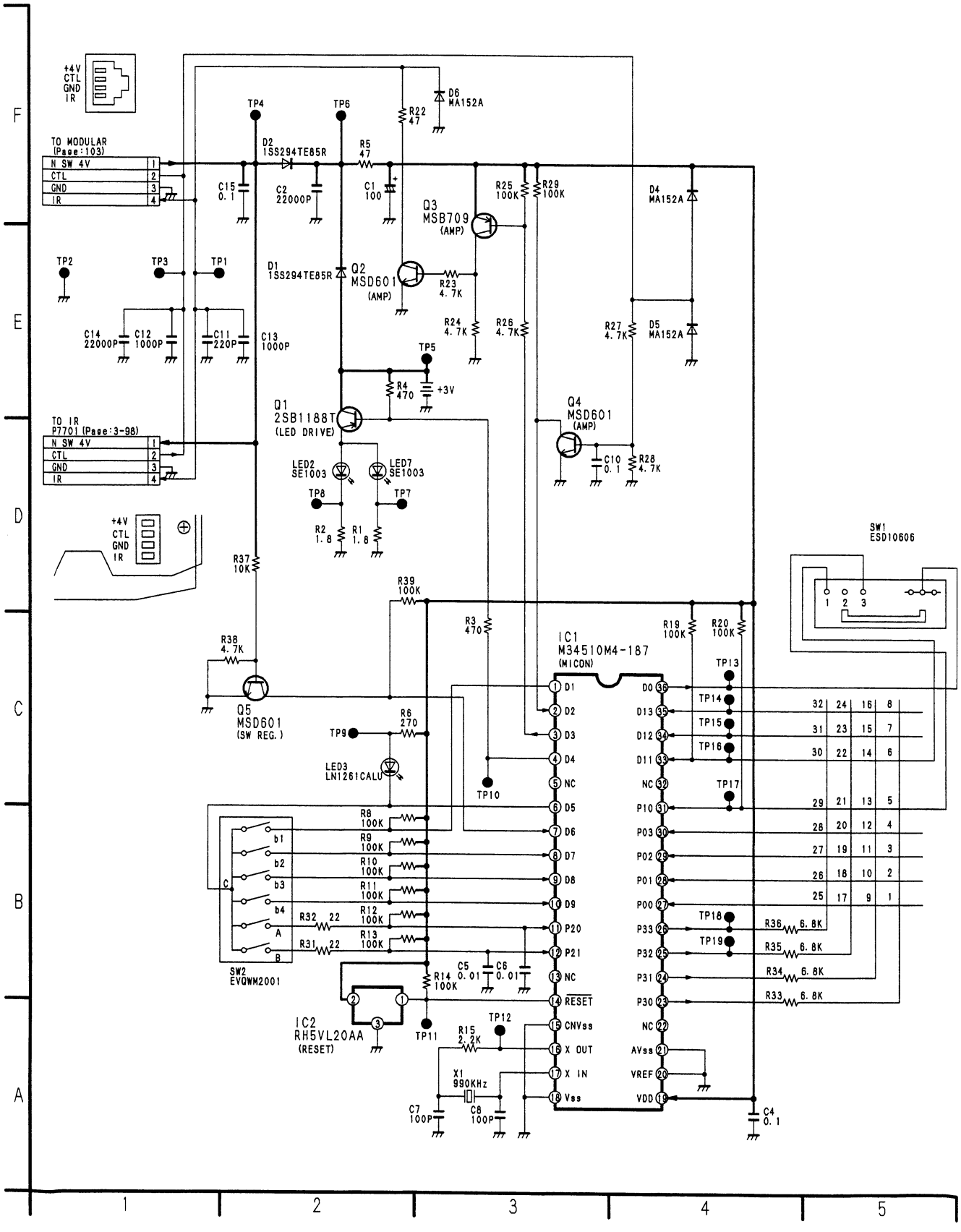


NOTE: THE MEARSUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV : SP MODE).

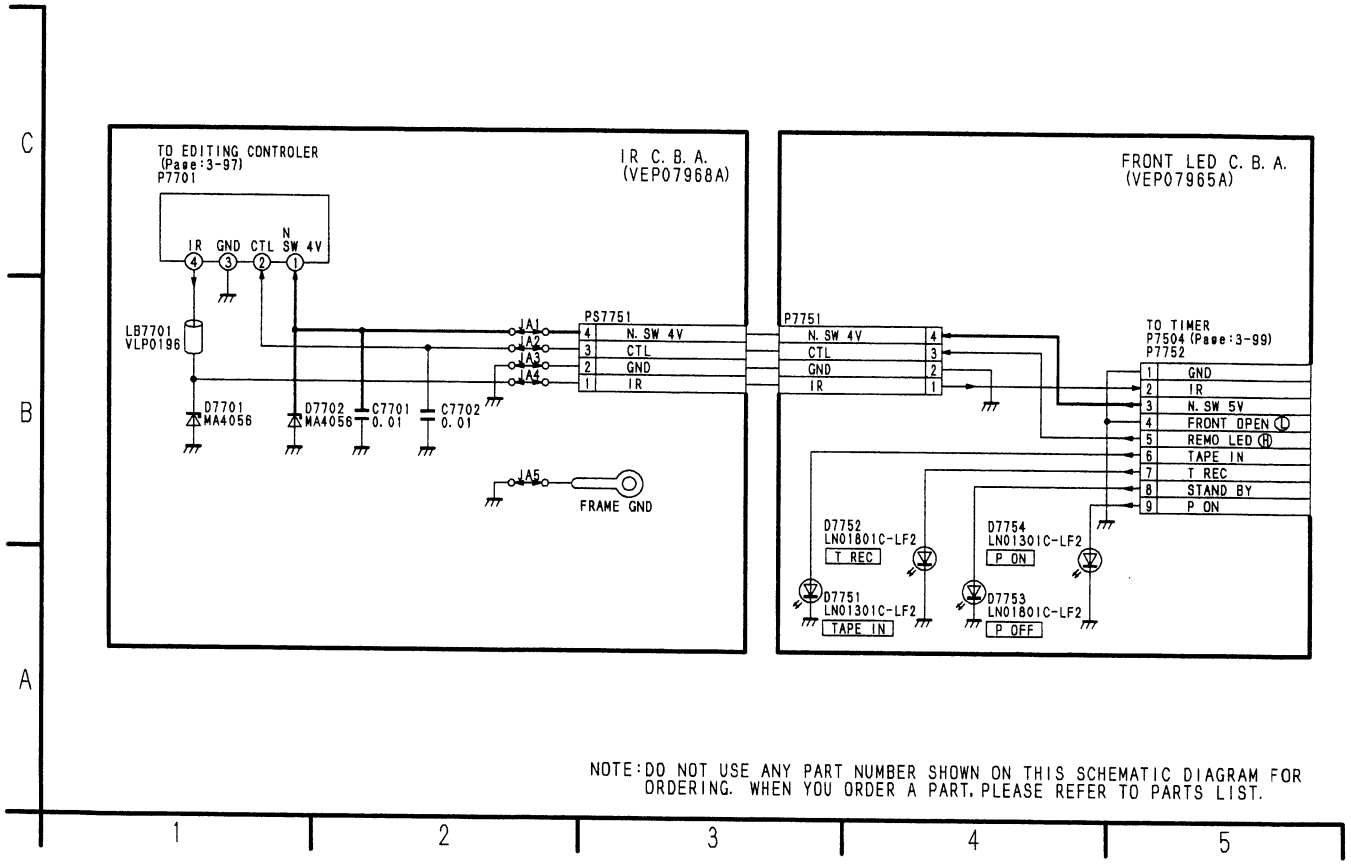
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COROUR SIGNAL. (MINI DV : SP MODE).

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART. PLEASE REFER TO PARTS LIST.

3-37. EDITING CONTROLLER SCHEMATIC DIAGRAM



3-38. IR, FRONT LED SCHEMATIC DIAGRAMS

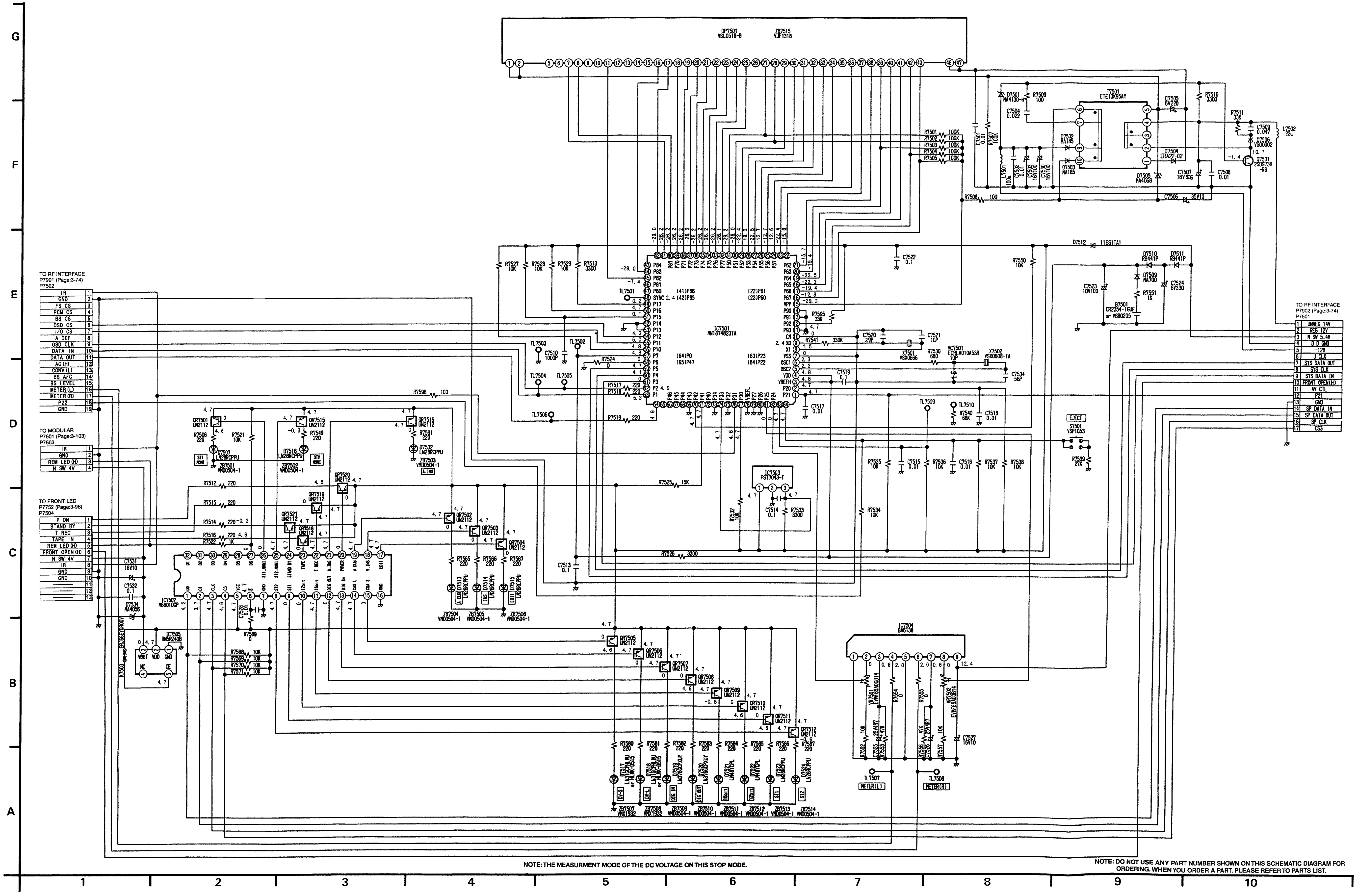


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

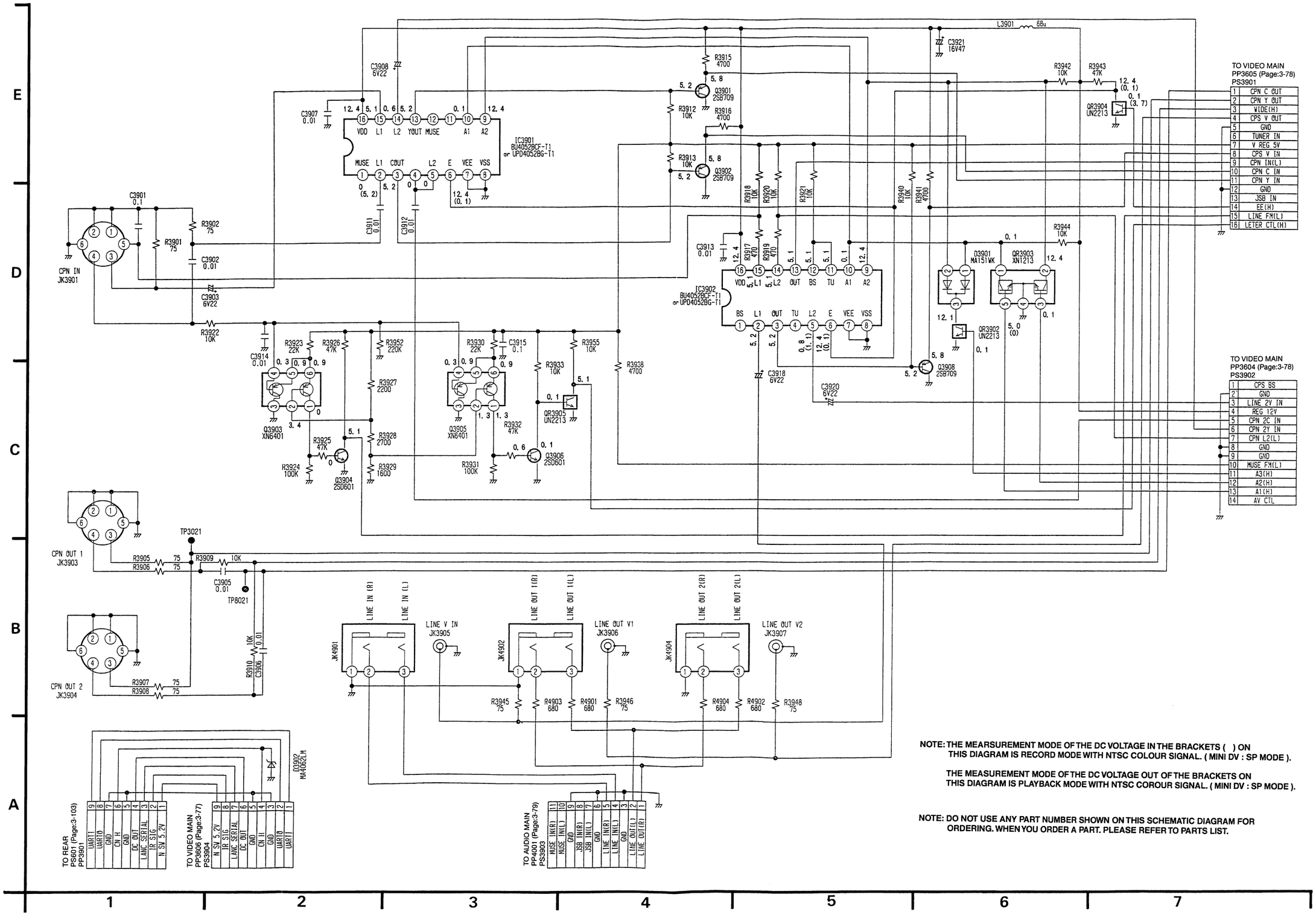
IC7502 (M66010GP): SUB MICON

PIN. NO.	SIGNAL NAME	I/O	EXPLANATION	PIN. NO.	SIGNAL NAME	I/O	EXPLANATION
1	DO	O	Serial Data	17	EDIT	O	LED ON Edit
2	DI	I	Serial Data	18	V INS	O	LED ON Video Insert
3	CLK	I	Serial Clock	19	A DUB	O	LED ON Audio Dubbing
4	CS	I	I/O Chip Select	20	POWER	O	LED ON Power
5	VCC	I		21	A INS	O	LED ON Audio Insert
6	—	I		22	T REC	O	LED ON Timer Rec
7	GND	—		23	TAPE	O	LED ON Cassette In
8	ST2	O	LED ON Data Stereo 2	24	STAND BY	O	LED ON Stand By
9	ST1	O	LED ON Data Stereo 1	25	ST2 MONI	O	LED ON Monitor Stereo 2
10	12bit	O	LED ON 12 Bit	26	ST1 MONI	O	LED ON Monitor Stereo 1
11	16bit	O	LED ON 16 Bit	27	D6	O	LED ON
12	DIG OUT	O	LED ON DV Output	28	D5	—	NC
13	DIG IN	O	LED ON DV Input	29	D4	—	NC
14	CAS L	O	LED Normal Cassette	30	D3	—	NC
15	CAS S	O	LED On Mini Cassette	31	D2	—	NC
16	GND	—		32	D1	—	NC

3-39. TIMER SCHEMATIC DIAGRAM



3-40. INPUT / OUTPUT SCHEMATIC DIAGRAM

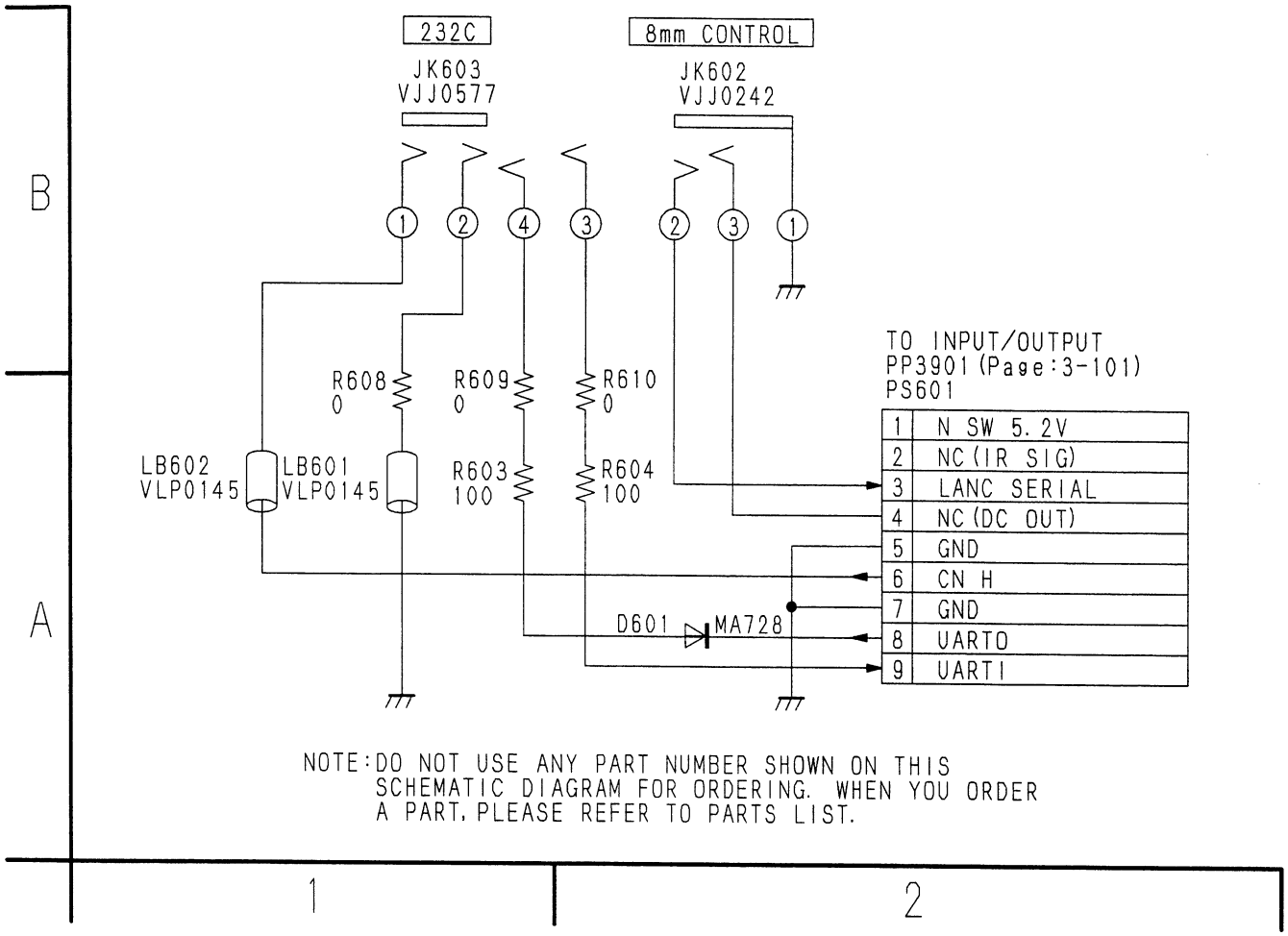


NOTE: THE MEARSUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (MINI DV : SP MODE).

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COROUR SIGNAL. (MINI DV : SP MODE).

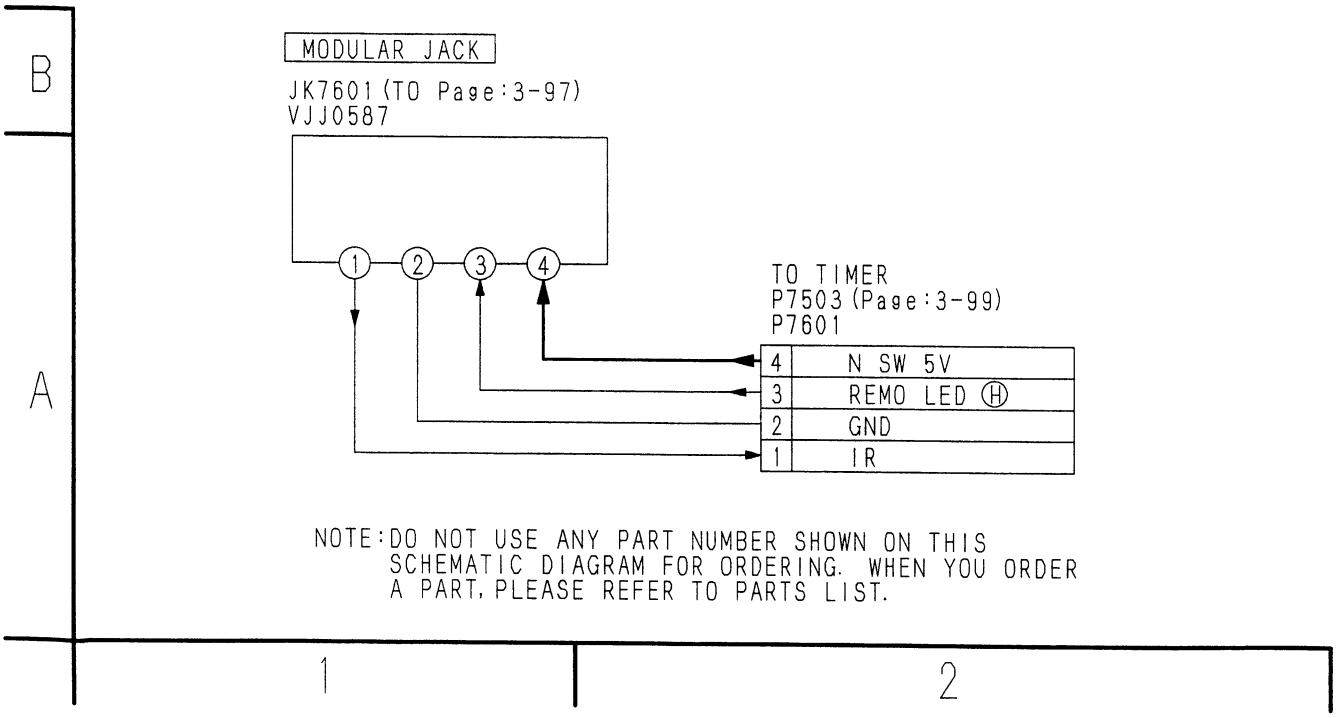
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART. PLEASE REFER TO PARTS LIST.

3-41. REAR SCHEMATIC DIAGRAM



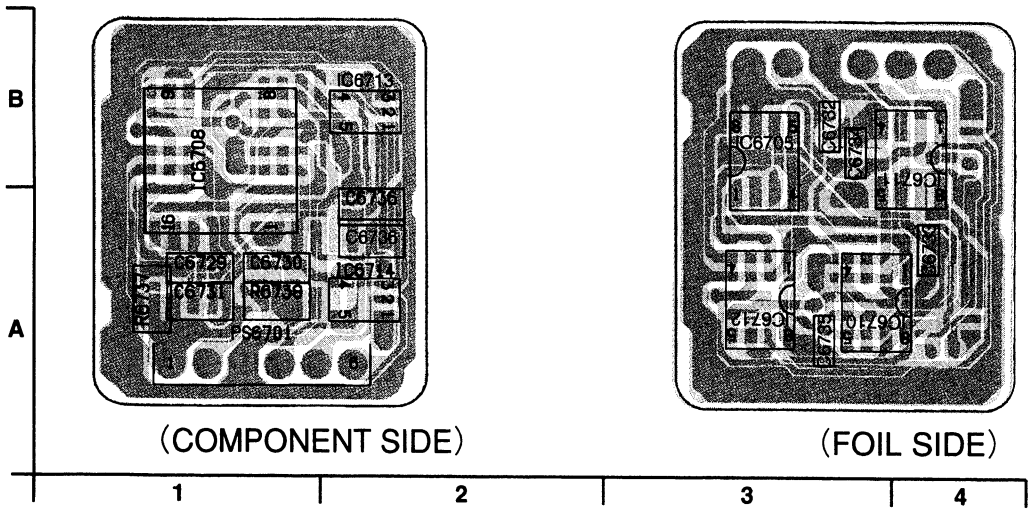
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-42. MODULAR SCHEMATIC DIAGRAM

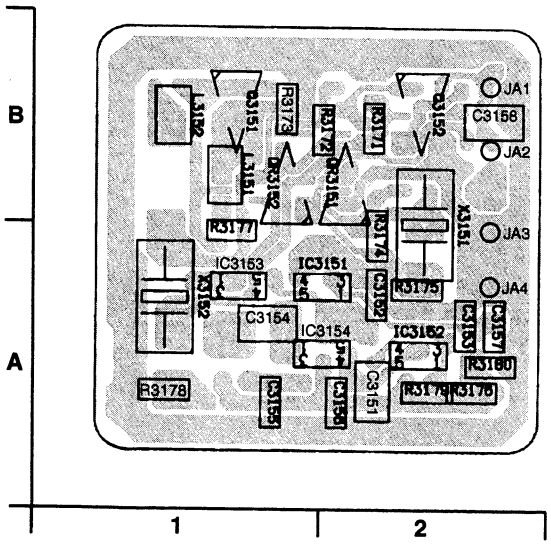


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

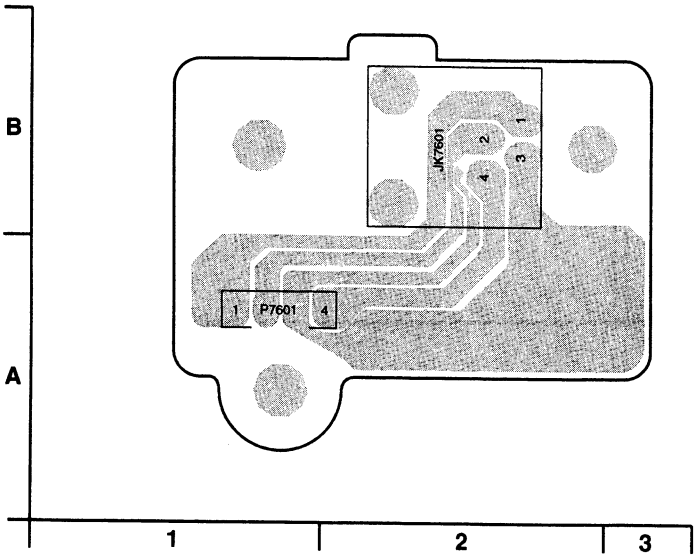
3-43. PG ADD C.B.A. (VEP06C59A)



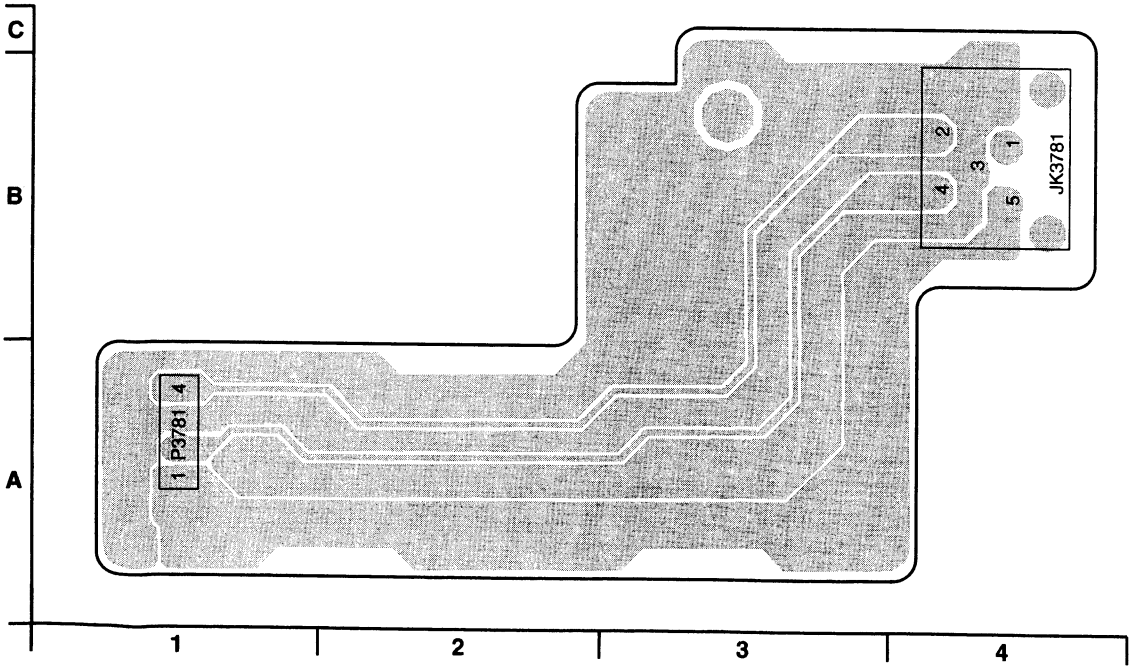
3-44. CLOCK CHANGE C.B.A. (VEP03E78A)



3-45. MODULAR C.B.A. (VEP07966A)

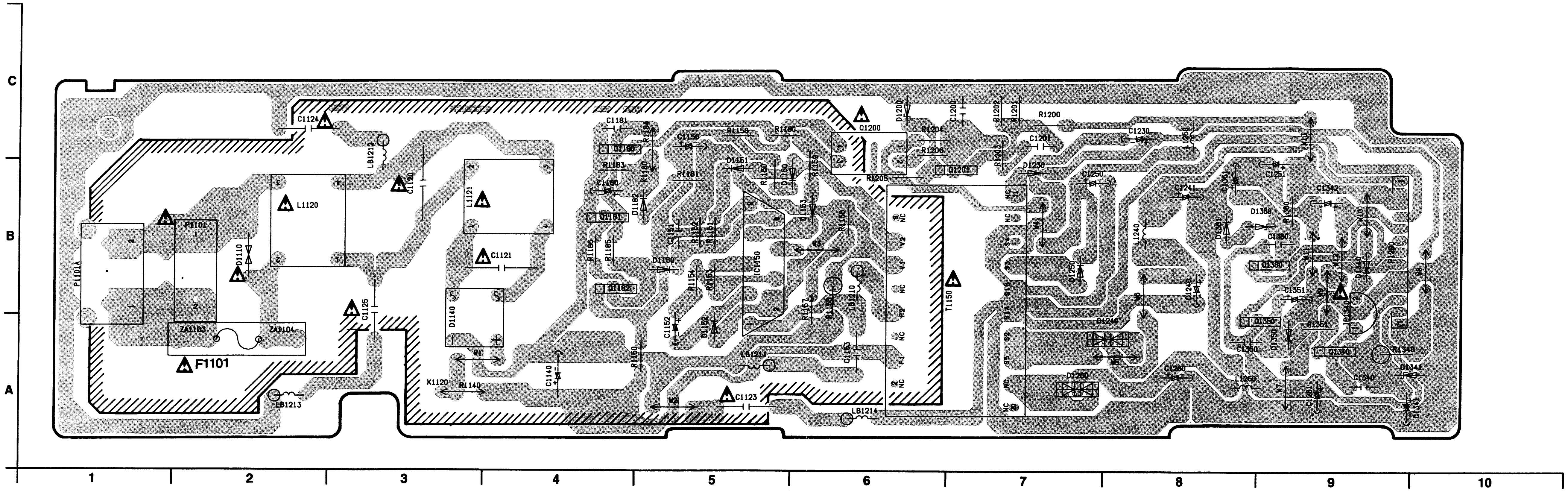


3-46. 5P JACK C.B.A. (VEP03E18A)

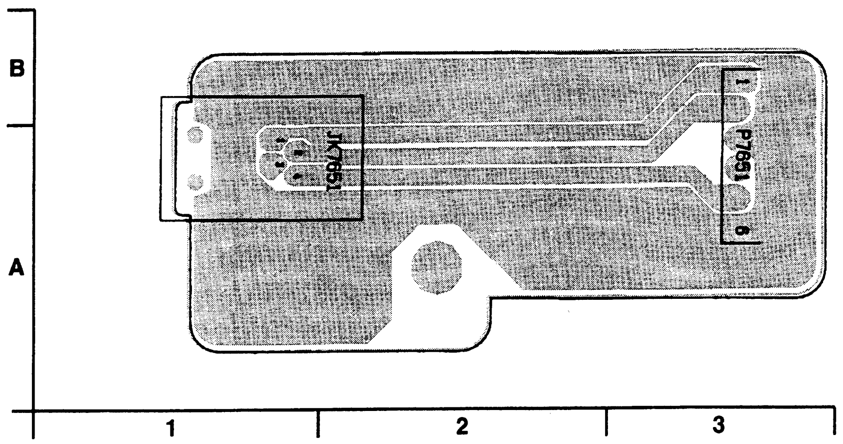


3-47. POWER SUPPLY C.B.A. (VEP01839A)

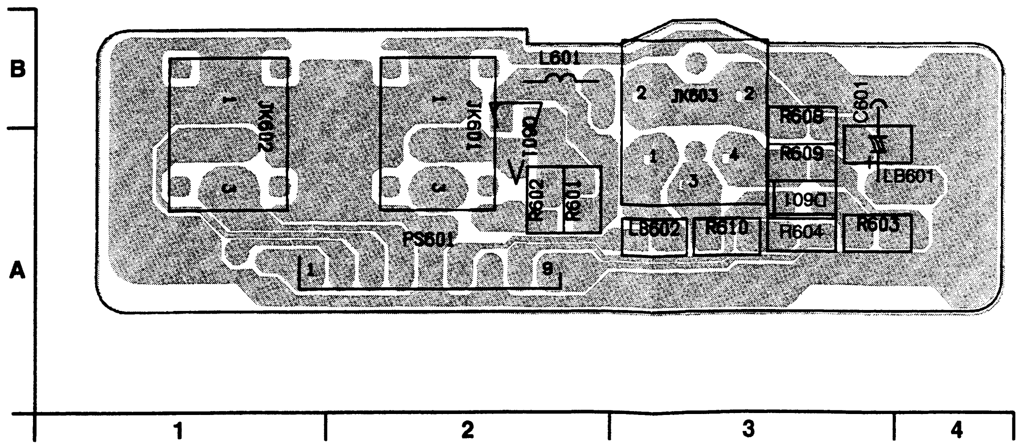
CAUTION	THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT. PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.



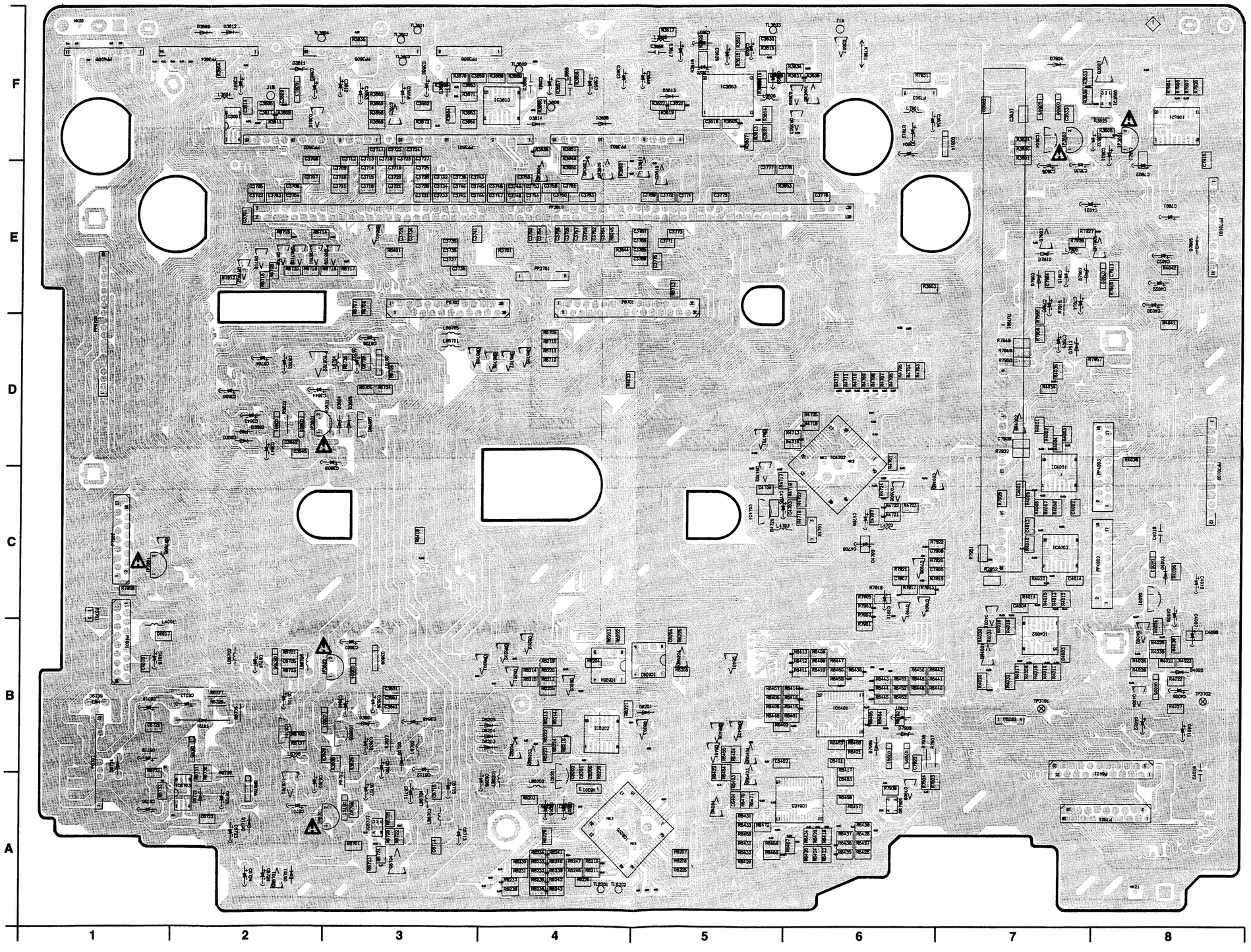
3-48. DV JACK C.B.A. (VEP07967A)



3-49. REAR C.B.A. (VEP03E08A)



3-50. MAIN C.B.A. (VEP06C02C)



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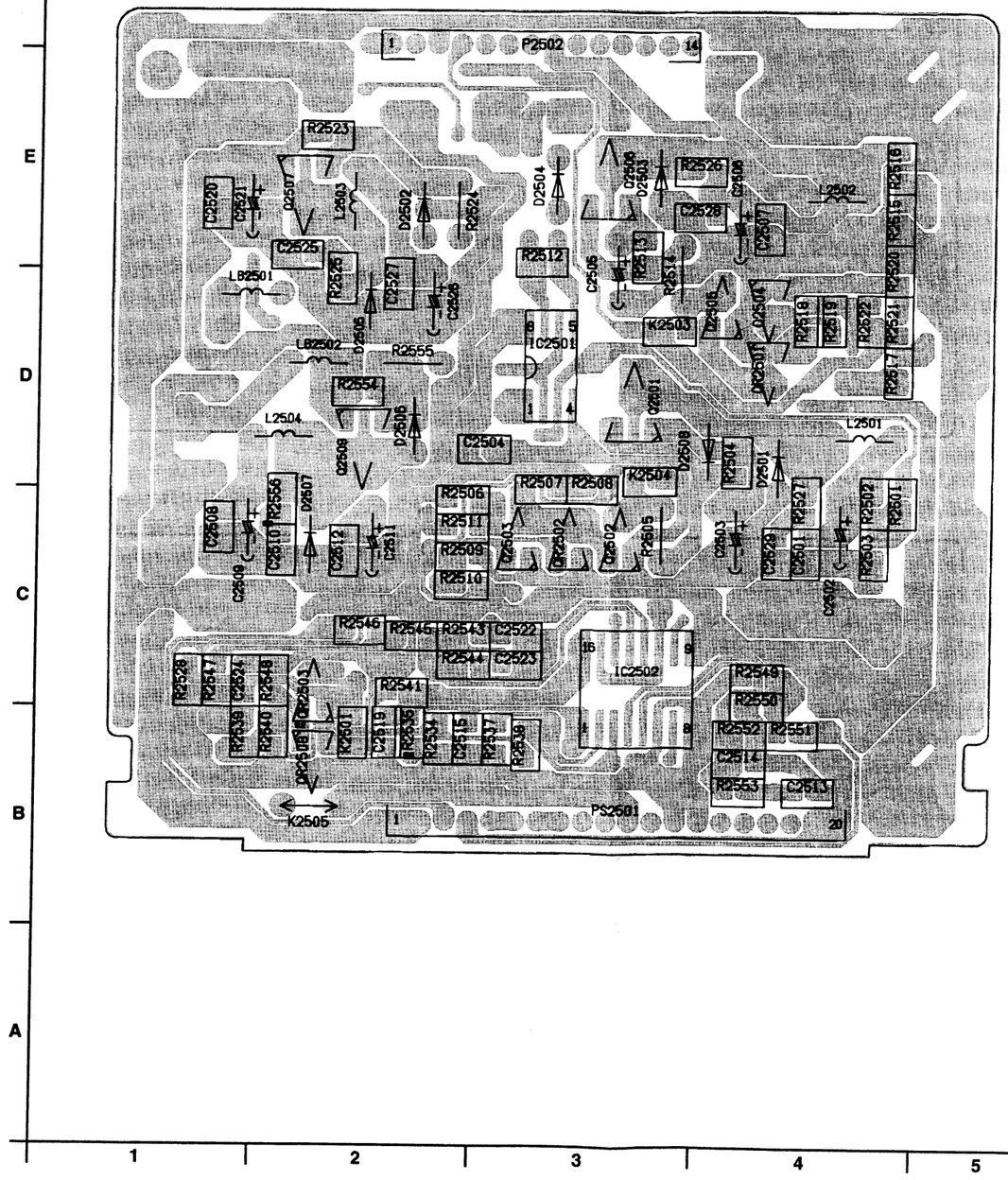
MAIN C.B.A.											
Transistor		Q6704	A-3	QR6401	E-3	IC4702	D-6	TP3702	B-8		
Q3601	D-2	Q6705	B-2	QR6402	B-5	IC4703	C-5	**Connector**			
Q3602	D-2	Q6706	B-2	QR6403	A-5	IC6201	A-4	P3701	C-1		
Q3603	B-3	Q6707	D-3	QR6404	B-5	IC6202	B-4	P4001	B-1		
Q3604	B-3	Q7901	B-6	QR6405	B-5	IC6203	B-5	P6201	B-7		
Q3605	F-7	Q7902	E-8	QR6701	A-2	IC6204	B-4	P6401	A-8		
Q3606	F-7	Q7903	E-7	QR6704	A-2	IC6205	A-4	P6701	E-4		
Q3607	F-8	Q7904	C-6	QR6705	D-4	IC6401	B-6	P6703	E-3		
Q3608	B-3	Q7905	B-6	QR6706	D-4	IC6403	A-6	P6707	B-1		
Q3609	F-6	Q7906	C-6	QR6707	D-4	IC6701	A-2	P7901	A-8		
Q3610	E-5	Q7907	C-6	QR6708	D-3	IC6702	D-2	P7902	C-1		
Q3611	E-5	Q7908	A-6	QR6709	E-3	IC6703	A-2	P7903	F-6		
Q3612	F-3	**Transistor & Resistor**		QR6710	E-2	IC6704	B-2	PP3601	F-3		
Q3613	F-2	QR3601	F-6	QR7901	E-7	IC6705	D-3	PP3602	F-2		
Q3614	F-7	QR3603	F-6	QR7902	E-2	IC6707	A-3	PP3603	F-4		
Q4001	C-8	QR3604	E-4	QR7905	A-6	IC7901	F-8	PP3604	F-2		
Q4002	B-8	QR3607	E-4	QR7906	C-1	**Test Point**		PP3605	F-3		
Q4003	C-8	QR3609	E-4	**Integrated Circuit**		TL3601	F-3	PP3606	F-3		
Q4004	B-8	QR4001	B-7	IC3601	F-2	TL3602	F-3	PP3610	E-4		
Q4005	B-8	QR4002	D-7	IC3603	F-5	TL3603	F-3	PP3701	E-4		
Q6201	B-4	QR4003	C-6	IC3604	F-7	TL3604	F-2	PP4001	F-1		
Q6202	B-4	QR4701	D-5	IC3605	B-3	TL3608	F-4	PP4002	C-8		
Q6203	B-5	QR4702	C-5	IC3606	F-8	TL3609	F-4	PP4003	C-8		
Q6204	B-4	QR6201	B-4	IC3610	F-4	TL3623	F-5	PP6706	D-1		
Q6401	B-5	QR6202	B-4	IC4001	C-7	TL6201	A-4	PP70101	E-8		
Q6701	E-2	QR6203	B-4	IC4002	B-7	TL6202	A-4	PP70102	C-8		
Q6702	E-2	QR6204	B-5	IC4003	C-7	TP3701	B-7				

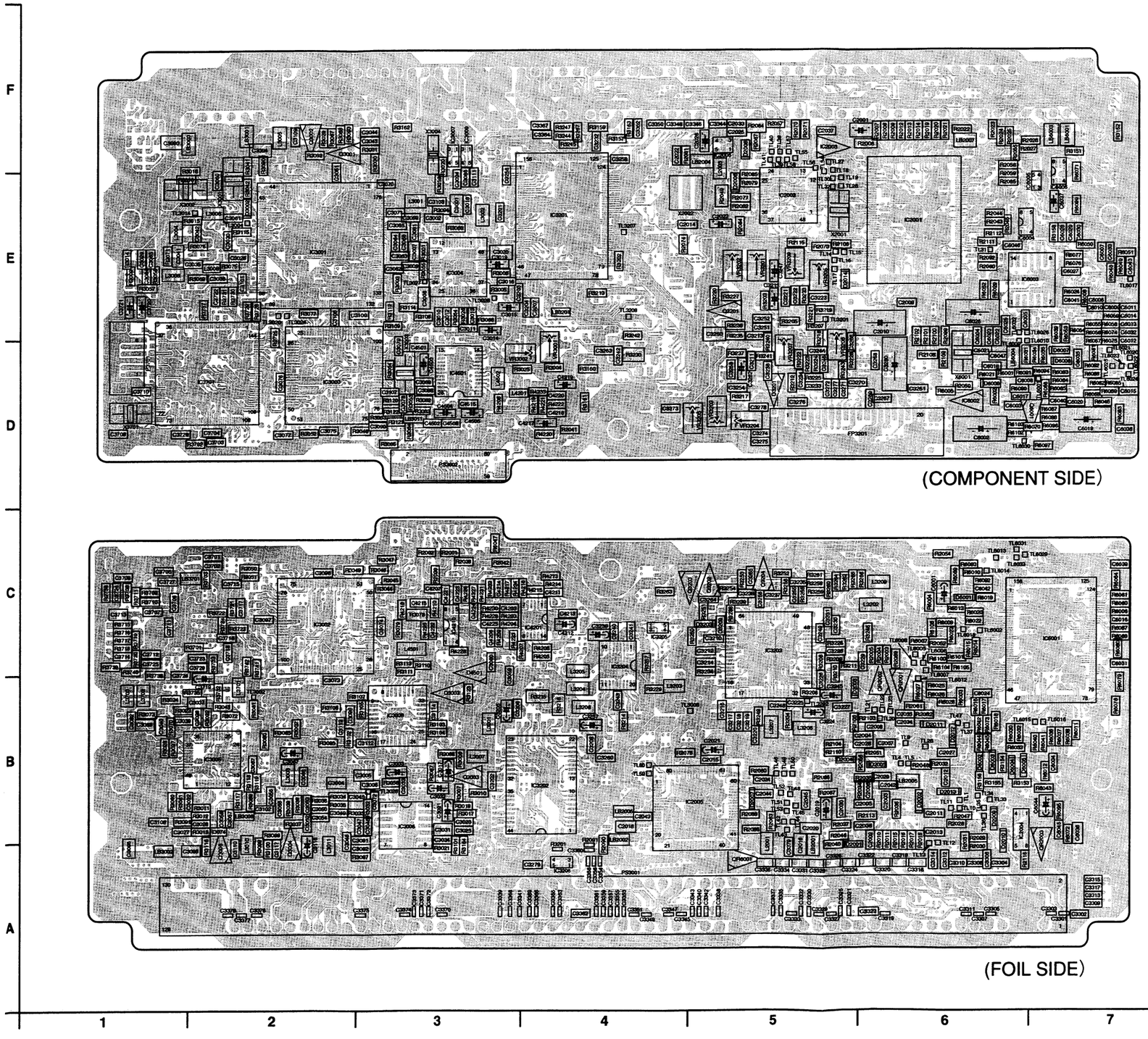
ADDRESS INFORMATION

3-51. MOTOR DRIVE C.B.A. (VEP06C29A)



3-52. DIGITAL C.B.A. (VEP03D98A)

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.



(COMPONENT SIDE)

(FOIL SIDE)

DIGITAL C.B.A. (1)

Transistor	
Q3001	F-2
Q3002	F-2
Q3003	B-3
Q3004	A-2
Q3005	A-2
Q3201	E-5
Q3202	C-5
Q3203	C-5
Q3204	C-5
Q6001	D-6

Transistor & Resistor	
QR2001	B-6
QR2002	B-6
QR2003	B-7
QR6001	A-5

Integrated Circuit	
IC2001	E-6
IC2002	E-5
IC2003	F-5
IC2004	B-6
IC2005	B-5
IC2006	F-5
IC3001	E-2
IC3002	C-2
IC3003	D-2
IC3004	E-3
IC3005	B-2
IC3006	B-3
IC3007	F-3
IC3009	F-3
IC3201	E-4
IC3202	B-4
IC3203	C-5
IC3204	C-4
IC3205	C-4
IC3701	D-2
IC4201	C-4
IC4210	C-3
IC4501	D-3
IC6001	C-7
IC6002	D-6
IC6003	E-6
IC6004	E-5
IC6005	E-6
IC6006	E-7

Diode	
D2001	B-5
D2003	B-5
D2004	B-5
D2005	B-6
D2006	E-5
D2007	B-5
D2008	F-5
D2009	B-6
D2010	B-6
D2011	B-6
D2012	B-6
D2013	B-6
D2014	E-5
D3002	E-2
D3003	B-3
D3201	D-5
D3203	C-5
D4501	C-3
D6001	C-6
D6002	B-6
D6003	B-6
D6004	B-6
D6005	B-6
D6007	D-7
D6008	D-7

Test Point	
TL1	B-6
TL4	B-6
TL5	B-6
TL9	B-6
TL10	B-6
TL11	B-6
TL12	B-6
TL13	B-6
TL14	E-5
TL15	E-5
TL16	E-5
TL17	E-5
TL18	F-5
TL19	F-5
TL20	B-6
TL21	B-6
TL22	B-6
TL23	B-6
TL26	B-6
TL27	F-5
TL28	E-5
TL30	F-5
TL31	E-6
TL32	E-5
TL33	B-6
TL34	B-6
TL35	B-6
TL36	B-6
TL37	B-6
TL38	F-5
TL39	F-5
TL40	F-5
TL41	F-5
TL42	B-5
TL43	B-5
TL44	B-5
TL45	B-5
TL46	B-5
TL47	B-6
TL48	B-5
TL49	B-5
TL50	B-5
TL51	B-5
TL52	B-5
TL53	B-5
TL54	F-5
TL55	F-5
TL56	F-5
TL57	F-5
TL58	F-5
TL59	B-4
TL60	B-4
TL3002	B-2
TL3004	E-2
TL3006	B-5
TL3014	E-1
TL3020	E-2
TL3024	E-2
TL3026	E-3
TL3027	E-3
TL3028	E-3
TL3201	E-5
TL3202	B-5
TL3207	E-4
TL3208	E-4
TL6001	D-7
TL6002	C-6
TL6005	C-6
TL6006	C-6
TL6007	C-6
TL6008	C-6
TL6009	E-6
TL6010	E-7
TL6012	B-6
TL6013	C-6
TL6014	C-6
TL6015	B-6
TL6016	B-7
TL6017	E-7
TL6018	C-6
TL6020	D-7
TL6021	D-7
TL6022	D-7
TL6023	D-7
TL6024	D-7
TL6025	D-7
TL6026	E-7
TL6029	C-6
TL6030	D-6
TL6031	C-6
TL6032	E-6
TL6033	C-6

Connector	
FP3201	D-5
P3701	D-1
PS3001	A-4
PS3002	D-3

Crystal Oscillator	
X2001	E-5
X2002	E-4
X3003	D-3
X3004	F-3
X3701	D-1
X6001	D-6

Coil	
L2001	A-5
L2003	F-5
L3001	E-3
L3002	E-3
L3003	B-2
L3004	E-1
L3006	E-2
L3007	B-3
L3008	E-1
L3009	E-2
L3011	A-2
L3201	B-3
L3202	C-6
L3203	B-4
L3204	B-4
L3205	C-4
L3206	B-5
L3207	B-5
L3208	B-4
L3209	C-6
L3701	B-2
L3702	B-1
L3703	B-1
L4201	D-3
L4501	C-3
L4502	D-3
LB2001	A-5
LB2002	B-4
LB2004	F-5
LB2005	B-6
LB2006	B-4
LB2007	F-6
LB3001	F-2
LB3002	A-1
LB3003	F-1
LB3006	B-2
LB3011	D-3
LB3201	E-4
LB3701	C-1
LB6001	F-7
LB6003	F-7
LB6004	D-6

Capacitor			
C2001	F-5	C3002	E-3
C2002	B-6	C3003	B-3
C2003	B-6	C3004	B-2
C2004	B-6	C3005	B-3
C2005	B-6	C3006	B-3
C2006	B-6	C3007	E-3
C2007	B-6	C3008	E-3
C2008	B-6	C3010	E-3
C2009	E-6	C3011	E-3
C2010	E-6	C3012	E-3
C2011	B-6	C3013	E-3
C2012	B-6	C3014	E-3
C2013	B-6	C3015	E-3
C2014	E-4	C3016	E-3
C2015	B-5	C3017	B-3
C2016	B-5	C3018	E-3
C2018	B-4	C3019	E-3
C2019	B-5	C3020	E-3
C2020	B-5	C3021	B-3
C2021	B-5	C3023	B-3
C2022	F-4	C3024	E-3
C2023	E-5	C3025	B-3
C2024	B-5	C3026	E-2
C2025	F-5	C3027	B-1
C2026	F-5	C3028	B-2
C2027	B-6	C3029	E-1
C2028	B-6	C3030	E-2
C2029	B-6	C3031	B-3
C2030	B-5	C3032	B-3
C2042	B-6	C3033	B-3
C2043	B-4	C3034	B-3
C2044	B-5	C3035	E-2
C2045	B-5	C3036	E-2
C3001	E-3	C3037	B-2
		C3038	B-2
		C3039	B-1
		C3040	B-1
		C3041	E-1
		C3042	E-2
		C3043	F-3
		C3044	F-3
		C3045	B-2
		C3046	B-3
		C3047	B-3
		C3048	A-2
		C3049	B-2
		C3050	B-2
		C3051	F-2
		C3052	B-2
		C3053	B-2
		C3054	B-2
		C3055	B-2
		C3056	B-2
		C3057	B-2
		C3058	B-2
		C3059	B-3
		C3062	E-3
		C3063	E-3
		C3064	E-3
		C3065	E-3
		C3066	B-2
		C3067	B-2
		C3068	E-3
		C3069	E-3
		C3070	E-3
		C3071	E-3
		C3072	B-3
		C3073	B-2
		C3074	C-3
		C3075	D-2
		C3076	D-2
		C3077	D-2
		C3078	D-3
		C3079	D-3
		C3080	C-3
		C3081	E-3
		C3082	B-1
		C3083	B-1
		C3084	E-1
		C3085	E-1
		C3086	E-3
		C3087	B-2
		C3090	D-3
		C3091	B-3
		C3092	A-3
		C3093	F-1
		C3094	F-2
		C3095	A-1

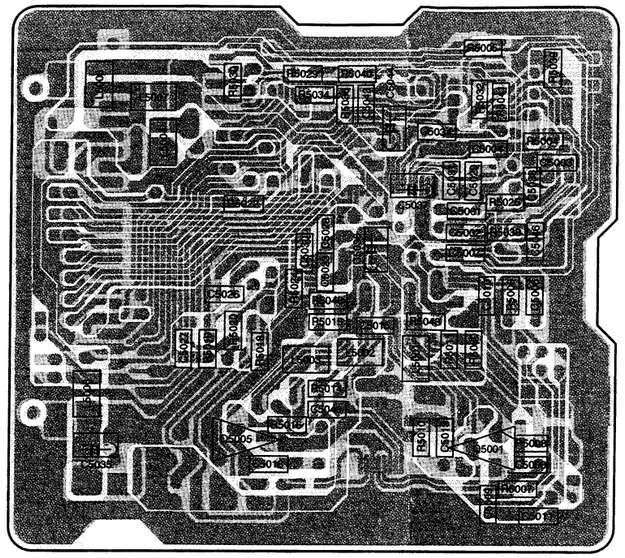
ADDRESS INFORMATION

DIGITAL C.B.A. (2)															
C3096	A-1	C3309	A-7	C3718	C-2	R2019	F-6	R3018	B-3	R3201	A-4	R3740	C-1	R6064	C-7
C3097	C-2	C3310	A-6	C3719	B-2	R2020	F-6	R3019	E-3	R3202	E-4	R4203	C-3	R6065	D-7
C3098	C-2	C3311	A-6	C3720	E-1	R2021	F-6	R3020	F-3	R3203	E-5	R4204	C-3	R6066	D-7
C3099	B-2	C3312	A-6	C3721	E-1	R2022	F-6	R3021	A-3	R3204	B-5	R4205	C-4	R6067	D-7
C3100	E-2	C3313	A-7	C3722	E-2	R2023	F-6	R3022	B-2	R3205	E-5	R4206	C-4	R6068	D-7
C3101	E-2	C3314	A-6	C3723	C-2	R2024	F-6	R3023	B-1	R3206	B-5	R4207	C-3	R6069	D-7
C3102	B-2	C3315	A-7	C3724	C-1	R2025	F-6	R3024	B-1	R3207	E-5	R4208	D-3	R6070	D-6
C3103	E-3	C3316	A-6	C3725	C-1	R2026	F-6	R3025	D-3	R3208	C-5	R4209	C-3	R6071	F-7
C3106	E-2	C3317	A-7	C3727	C-1	R2027	F-6	R3026	E-3	R3209	C-5	R4210	C-3	R6072	B-7
C3107	D-3	C3318	A-6	C4203	C-3	R2028	B-6	R3027	B-1	R3210	C-5	R4213	C-4	R6073	B-6
C3108	B-1	C3319	A-6	C4206	C-3	R2029	B-6	R3028	B-1	R3211	C-5	R4214	C-4	R6074	E-7
C3111	E-3	C3320	A-6	C4207	C-3	R2030	B-6	R3030	F-3	R3212	D-5	R4215	C-4	R6075	E-7
C3116	A-2	C3321	A-5	C4211	C-4	R2031	B-6	R3031	F-3	R3213	E-4	R4216	C-3	R6076	E-7
C3117	A-2	C3322	A-6	C4212	C-4	R2032	B-6	R3032	B-3	R3214	B-4	R4217	C-3	R6077	E-7
C3201	E-3	C3323	A-6	C4213	C-4	R2034	B-6	R3033	B-2	R3215	B-4	R4218	C-3	R6078	B-7
C3202	B-3	C3324	A-5	C4214	C-3	R2035	B-6	R3034	B-2	R3217	D-5	R4219	D-4	R6079	B-7
C3203	E-3	C3325	A-5	C4215	C-3	R2036	B-6	R3035	B-2	R3218	E-5	R4220	D-4	R6080	C-7
C3204	E-4	C3326	A-5	C4217	D-4	R2037	B-5	R3036	B-2	R3219	E-5	R4221	D-4	R6081	D-7
C3205	B-3	C3327	A-5	C4218	D-4	R2038	C-3	R3037	B-2	R3220	E-5	R4222	D-4	R6082	D-7
C3206	B-3	C3328	A-5	C4219	D-4	R2039	C-3	R3038	B-2	R3221	E-5	R4223	C-3	R6083	D-7
C3207	E-4	C3329	A-5	C4220	D-4	R2040	B-5	R3039	B-2	R3222	D-5	R4224	C-3	R6084	D-7
C3208	B-4	C3330	A-5	C4221	C-3	R2042	C-3	R3042	E-2	R3223	D-5	R4225	C-3	R6085	D-7
C3209	C-5	C3331	A-5	C4222	C-3	R2045	E-6	R3043	B-2	R3224	D-5	R4226	C-3	R6086	D-7
C3210	C-5	C3332	A-5	C4223	C-3	R2046	B-5	R3044	C-3	R3225	D-5	R4227	C-3	R6087	C-7
C3211	D-5	C3333	A-5	C4224	C-3	R2047	B-6	R3046	C-3	R3226	C-5	R4228	C-3	R6088	C-7
C3212	C-5	C3334	A-5	C4225	C-3	R2048	B-6	R3047	C-3	R3227	E-5	R4229	C-3	R6089	C-6
C3213	E-5	C3335	A-5	C4501	D-3	R2049	E-5	R3048	D-3	R3228	D-5	R4230	C-3	R6090	D-6
C3214	C-5	C3336	A-5	C4502	D-3	R2050	D-6	R3049	C-2	R3229	B-4	R4231	C-3	R6091	D-6
C3215	E-5	C3337	A-5	C4503	D-3	R2051	B-6	R3050	C-2	R3230	D-4	R4232	C-3	R6092	C-6
C3216	B-5	C3338	A-5	C4504	D-3	R2052	C-6	R3051	C-2	R3233	E-5	R4233	D-4	R6093	C-6
C3217	B-5	C3339	A-3	C4505	D-3	R2055	F-6	R3052	D-2	R3234	C-5	R6001	D-6	R6094	D-7
C3218	B-5	C3340	A-5	C4506	D-3	R2056	B-6	R3053	D-3	R3235	E-5	R6003	B-6	R6095	B-7
C3219	B-5	C3341	A-3	C4515	D-3	R2057	F-5	R3054	D-3	R3236	E-5	R6006	C-7	R6096	D-7
C3220	B-5	C3342	A-5	C6001	C-6	R2058	F-6	R3055	E-3	R3237	D-5	R6008	E-7	R6097	D-7
C3221	E-5	C3343	A-5	C6002	D-6	R2059	F-6	R3057	E-1	R3238	C-5	R6009	C-6	R6098	D-7
C3222	E-5	C3344	F-5	C6003	D-6	R2060	E-6	R3058	E-1	R3239	C-5	R6010	C-6	R6099	E-7
C3223	E-5	C3345	A-4	C6004	E-6	R2061	B-6	R3060	B-1	R3240	D-5	R6011	B-7	R6100	C-6
C3224	B-5	C3346	F-5	C6005	E-6	R2062	B-6	R3061	B-1	R3241	D-5	R6012	B-7	R6101	C-6
C3225	B-5	C3347	A-4	C6006	E-7	R2063	B-5	R3064	E-3	R3242	E-4	R6013	C-6	R6102	D-6
C3226	B-5	C3348	F-4	C6007	E-7	R2064	F-5	R3065	B-2	R3243	D-5	R6014	C-6	R6103	D-6
C3227	B-5	C3349	A-4	C6008	D-6	R2065	E-6	R3066	E-3	R3245	F-4	R6015	C-6	R6105	C-6
C3228	C-5	C3350	F-4	C6009	E-7	R2066	B-5	R3067	F-2	R3249	B-5	R6016	B-6	R6106	C-6
C3229	C-6	C3351	A-4	C6010	E-7	R2067	B-5	R3068	F-2	R3250	C-5	R6017	B-6		
C3230	C-5	C3352	F-4	C6011	E-7	R2070	F-5	R3069	E-2	R3251	C-5	R6018	B-6		
C3231	C-5	C3353	A-4	C6012	E-7	R2071	F-5	R3070	B-1	R3252	C-5	R6019	C-6		
C3232	F-4	C3354	A-4	C6015	D-7	R2073	E-5	R3072	B-2	R3253	C-5	R6020	C-6		
C3233	D-5	C3355	A-4	C6017	D-6	R2074	E-4	R3073	B-1	R3254	C-5	R6021	D-6		
C3234	D-5	C3356	A-4	C6018	D-6	R2076	B-4	R3074	B-2	R3255	C-5	R6022	C-6		
C3235	C-5	C3357	A-4	C6019	D-7	R2077	E-5	R3075	E-2	R3257	C-4	R6023	C-6		
C3236	D-5	C3358	A-4	C6020	D-7	R2079	E-5	R3077	E-2	R3258	C-5	R6024	E-7		
C3237	C-5	C3359	A-4	C6021	D-6	R2080	B-5	R3079	C-3	R3259	C-5	R6025	B-6		
C3238	C-5	C3360	A-4	C6022	E-6	R2081	F-4	R3080	B-2	R3260	C-5	R6026	B-6		
C3239	C-4	C3361	A-4	C6023	E-6	R2082	E-5	R3081	B-2	R3261	C-5	R6027	B-6		
C3240	C-4	C3362	A-4	C6024	B-6	R2084	E-5	R3082	D-3	R3262	C-5	R6028	B-6		
C3241	C-4	C3363	A-4	C6025	E-6	R2085	F-5	R3083	D-3	R3263	C-4	R6029	E-6		
C3242	D-4	C3364	F-4	C6026	E-6	R2086	B-5	R3084	D-3	R3264	C-5	R6030	B-6		
C3243	B-4	C3365	A-4	C6027	E-7	R2087	F-5	R3085	D-3	R3265	C-5	R6032	B-6		
C3244	D-5	C3366	A-4	C6028	E-7	R2088	B-5	R3086	B-3	R3266	C-5	R6033	B-6		
C3245	B-5	C3367	F-4	C6029	E-7	R2090	B-4	R3088	E-3	R3267	F-4	R6034	D-7		
C3246	D-5	C3368	A-3	C6030	E-7	R2092	E-6	R3089	B-2	R3701	C-2	R6035	D-7		
C3247	E-5	C3369	A-4	C6033	E-7	R2099	E-6	R3090	F-2	R3702	D-2	R6036	B-7		
C3248	B-5	C3370	A-3	C6034	B-7	R2100	E-6	R3091	B-1	R3703	C-2	R6037	B-7		
C3249	C-5	C3371	A-3	C6035	D-7	R2101	E-6	R3092	F-2	R3708	C-1	R6038	B-7		
C3250	E-5	C3372	A-3	C6036	B-7	R2102	E-6	R3094	E-3	R3709	C-1	R6039	E-7		
C3251	E-5	C3373	A-3	C6041	E-7	R2104	B-5	R3095	B-2	R3710	C-1	R6040	B-7		
C3252	E-5	C3374	A-3	C6043	E-7	R2105	B-5	R3097	A-3	R3711	C-1	R6041	B-7		
C3253	D-5	C3375	A-3	C6044	B-7	R2106	E-5	R3098	B-2	R3715	C-1	R6042	B-6		
C3254	D-5	C3376	A-2	C6045	B-7	R2111	E-6	R3099	A-2	R3716	C-1	R6043	B-7		
C3255	C-5	C3377	A-2	C6046	E-6	R2112	E-6	R3100	A-2	R3717	C-1	R6044	B-6		
C3256	C-5	C3378	A-2	C6047	D-6	R2113	B-6	R3101	A-3	R3718	C-1	R6045	B-6		
C3257	B-4	C3379	A-5	**Resistor**		R2115	E-5	R3117	B-2	R3719	C-1	R6046	D-7		
C3258	F-3	C3701	C-2			R2116	A-6	R3120	D-3	R3720	C-1	R6047	C-3		
C3259	F-4	C3702	C-2	R2001	C-3	R3001	E-3	R3121	D-3	R3721	C-2	R6048	E-7		
C3260	B-4	C3703	D-2	R2002	C-3	R3002	B-2	R3122	D-3	R3722	C-2	R6049	E-7		
C3261	D-6	C3704	D-2	R2003	C-6	R3003	E-3	R3123	B-3	R3723	C-2	R6050	E-7		
C3262	D-5	C3705	C-1	R2006	F-6	R3004	D-4	R3151	F-7	R3724	C-2	R6051	E-7		
C3264	C-5	C3706	C-1	R2007	F-6	R3005	E-3	R3152	F-7	R3725	E-2	R6052	E-6		
C3265	C-5	C3707	C-1	R2008	F-6	R3006	E-3	R3153	B-6	R3728	E-2	R6053	E-7		
C3267	D-6	C3708	D-1	R2009	F-6	R3007	B-3	R3154	B-6	R3729	E-2	R6054	E-7		
C3280	D-6	C3709	C-1	R2010	B-6	R3008	B-3	R3155	B-6	R3730	E-2	R6055	E-7		
C3301	A-7	C3710	D-1	R2011	B-6	R3009	E-1	R3156	B-6	R3731	E-2	R6056	E-7		
C3302	A-7	C3711	C-1	R2012	F-6	R3010	B-3	R3157	F-4	R3732	B-2	R6057	E-7		
C3303	A-7	C3712	C-1	R2013	F-6	R3011	B-2	R3158	E-7	R3733	C-2	R6058	E-7		
C3304	A-6	C3713	C-1	R2014	F-6	R3012	B-2	R3159	F-4	R3735	B-2	R6059	E-7		
C3305	A-6	C3714	C-1	R2015	B-6	R3013	B-2	R3160	D-4	R3736	C-1	R6060	C-7		
C3306	A-6	C3715	C-2	R2016	B-6	R3014	E-1	R3161	D-4	R3737	E-2	R6061	C-7		
C3307	A-6	C3716	C-2	R2017	B-6	R3016	F-2	R3162	F-3	R3738	C-1	R6062	D-7		
C3308	A-6	C3717	C-2	R2018	B-6	R3017	B-3	R3163	F-4	R3739	C-1	R6063	D-7		

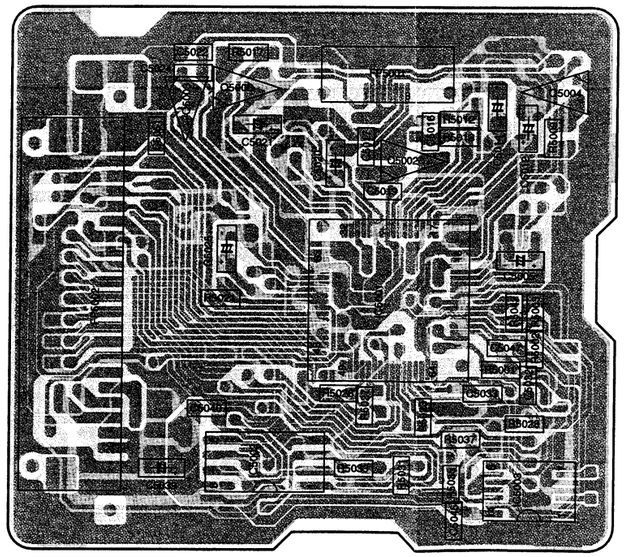
ADDRESS INFORMATION

3-53. HEAD AMP C.B.A. (VEP05351A)

NOTE: MULTILAYER C.B.A.
THIS C.B.A. IS Multi-Layer C.B.A. THIS CIRCUIT BOARD SHOWS COMPONENT LAYOUT-PATTERN FOR COMPONENT SIDE AND FOIL SIDE. LAYOUT-PATTERNS ARE SINGLE PATTERN FOR EACH SIDE THAT MAKE EASY TO SIGHT THE COMPONENT LAYOUT.

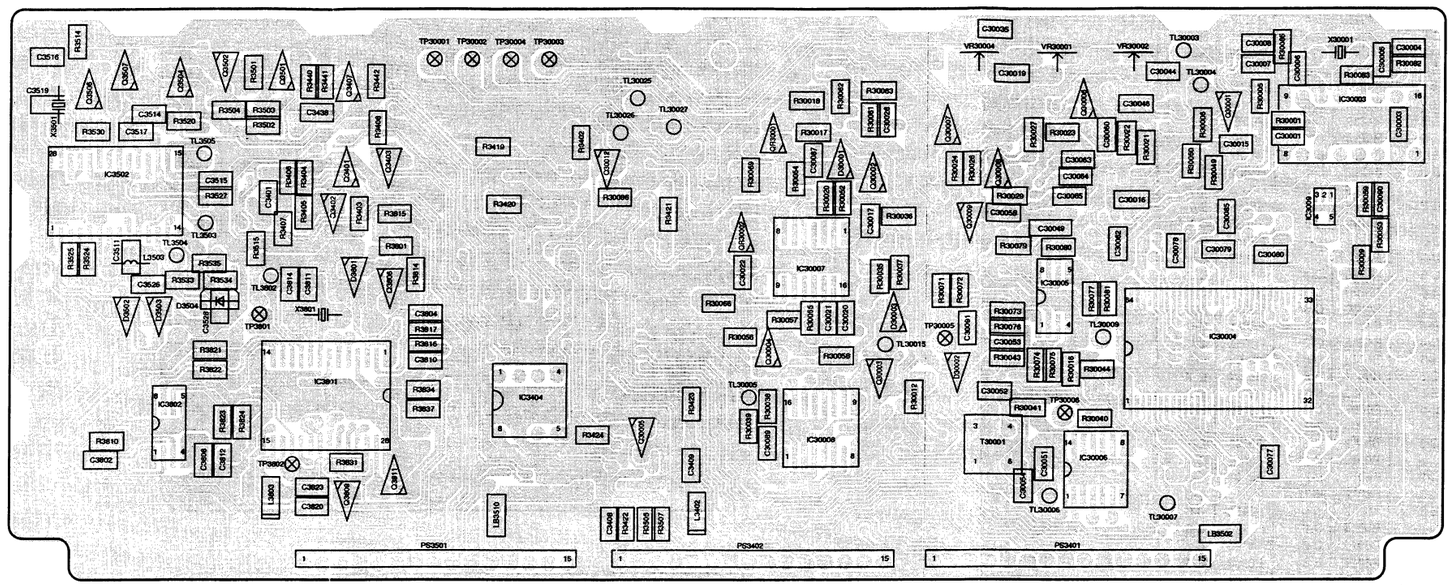


(FOIL SIDE)

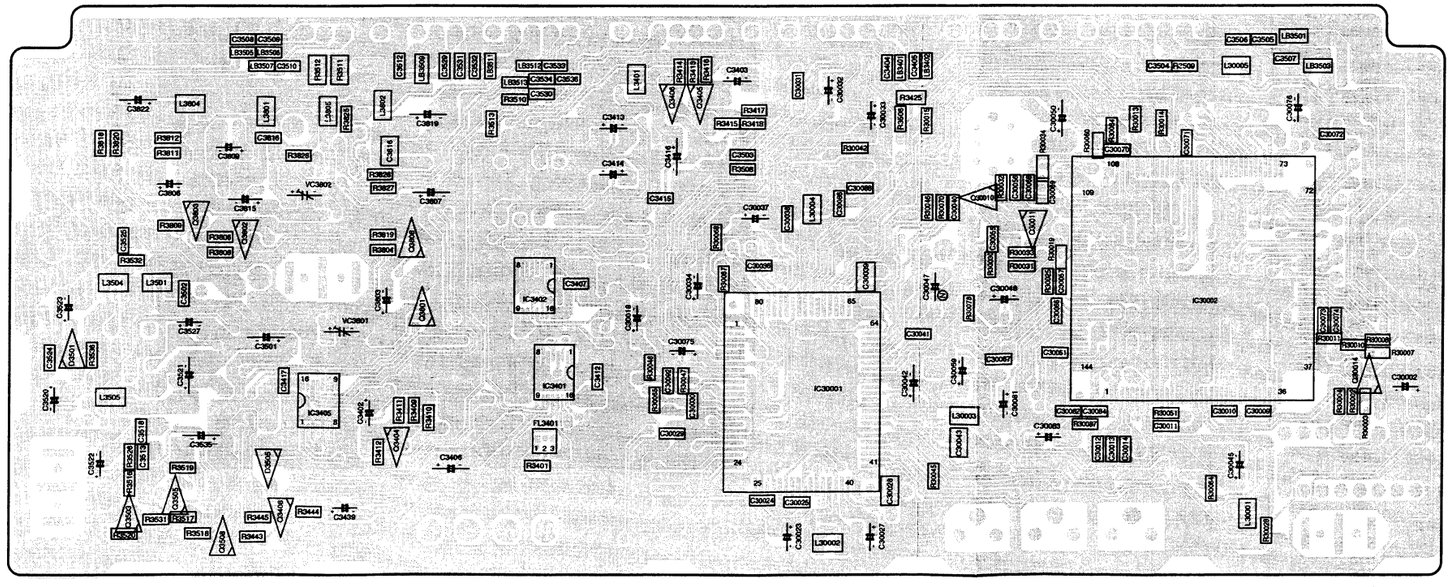


(COMPONENT SIDE)

3-54. ANALOG C.B.A. (VEP03D99A)



(COMPONENT SIDE)



(FOIL SIDE)

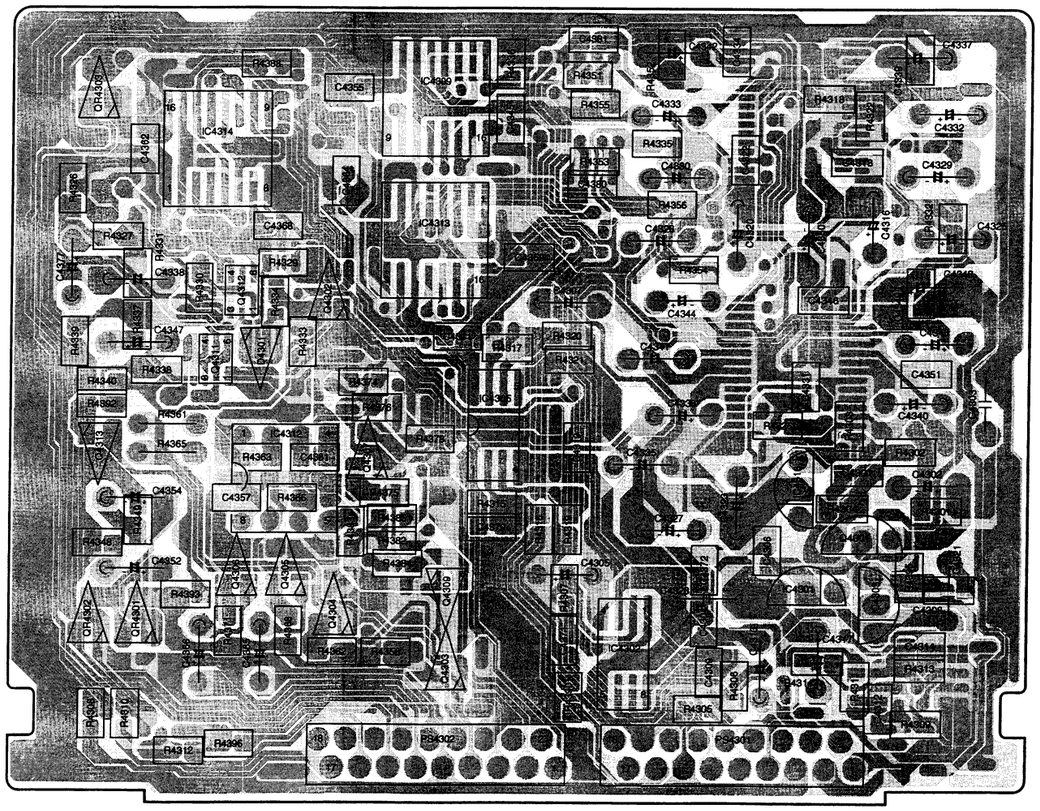
ANALOG Y/C C.B.A.			
Transistor		IC3801	E-2
Q3401	E-2	IC3802	D-2
Q3402	E-2	IC30001	B-4
Q3403	E-3	IC30002	B-6
Q3404	A-3	IC30003	F-7
Q3405	C-4	IC30004	E-6
Q3406	C-4	IC30005	E-5
Q3407	F-2	IC30006	D-6
Q3408	A-2	IC30007	E-4
Q3501	F-2	IC30008	D-4
Q3502	F-2	IC30009	E-7
Q3503	A-1	**Test Point**	
Q3504	F-2	TL3503	E-2
Q3505	A-2	TL3504	E-2
Q3506	F-1	TL3505	F-2
Q3507	F-1	TL3802	E-2
Q3508	A-2	TL30003	F-6
Q3801	B-3	TL30004	F-6
Q3802	B-2	TL30005	E-4
Q3803	B-2	TL30006	D-5
Q3806	E-3	TL30007	D-6
Q3808	B-3	TL30009	E-6
Q3809	D-2	TL30015	E-5
Q3811	D-3	TL30025	F-4
Q30001	F-6	TL30026	F-4
Q30002	E-5	TL30027	F-4
Q30003	E-5	TP3801	E-2
Q30004	E-4	TP3802	D-2
Q30005	D-4	TP30001	F-3
Q30006	F-6	TP30002	F-3
Q30007	F-5	TP30003	F-3
Q30008	E-5	TP30004	F-3
Q30009	E-5	TP30005	E-5
Q30010	C-5	TP30006	D-5
Q30011	B-5	**Adjustment**	
Q30012	E-3	VC3801	B-2
Q30014	B-7	VR30001	F-5
Transistor & Resistor		VR30002	F-6
QR30001	F-4	VR30004	F-5
QR30001	E-4		
Integrated Circuit			
IC3401	B-3	**Connector**	
IC3402	B-3	PS3401	D-5
IC3404	D-3	PS3402	D-4
IC3405	B-2	PS3501	D-3
IC3502	E-1		

ADDRESS INFORMATION

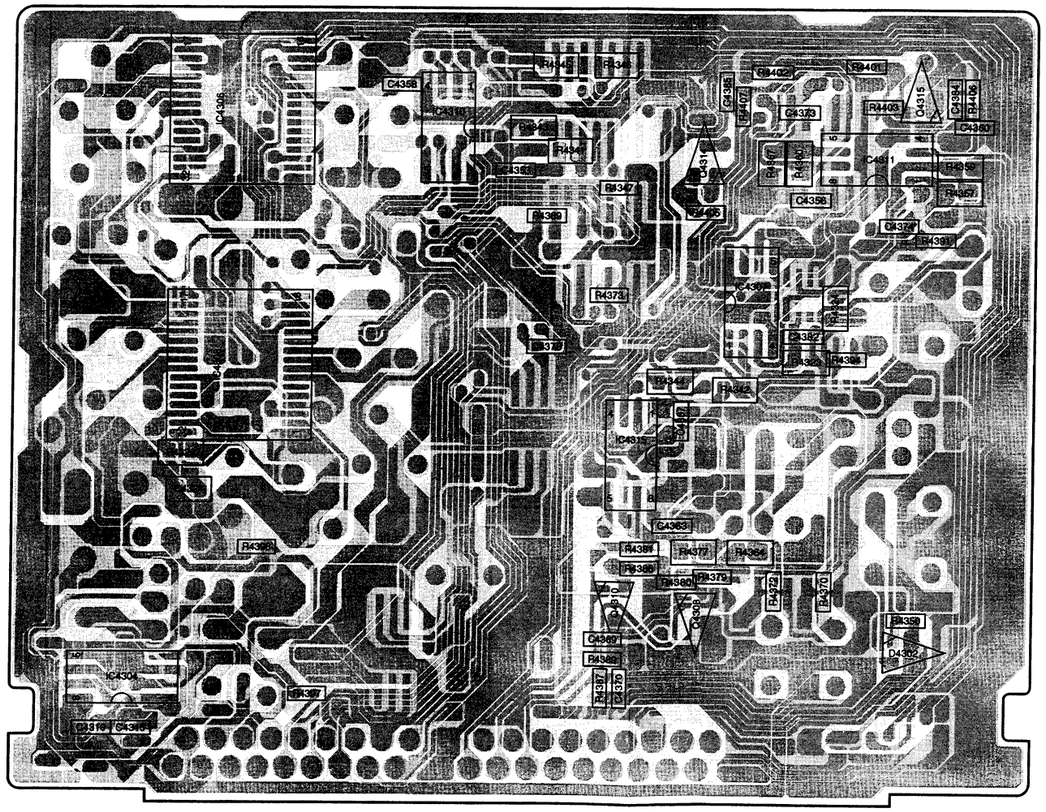
3-55. AUDIO C.B.A. (VEP04669A)

AUDIO C.B.A.					
Transistor		Q4310	B-8	**Integrated Circuit**		IC4310	D-8
		Q4311	C-2			IC4311	D-9
Q4301	B-5	Q4312	D-2	IC4301	B-4	IC4312	C-2
Q4302	C-2	Q4313	C-1	IC4302	B-3	IC4313	D-3
Q4303	B-3	Q4314	D-9	IC4303	B-5	IC4314	D-2
Q4304	B-2	Q4315	D-10	IC4304	B-6	IC4315	C-8
Q4305	B-2	**Transistor & Resistor**		IC4305	C-3	IC4316	C-4
Q4306	B-2			IC4306	D-6	**Connector**	
Q4307	C-2	QR4301	B-1	IC4307	D-9		
Q4308	B-9	QR4302	B-1	IC4308	C-6	PS4301	A-4
Q4309	B-3	QR4303	D-1	IC4309	E-3	PS4302	A-3

ADDRESS INFORMATION



(COMPONENT SIDE)

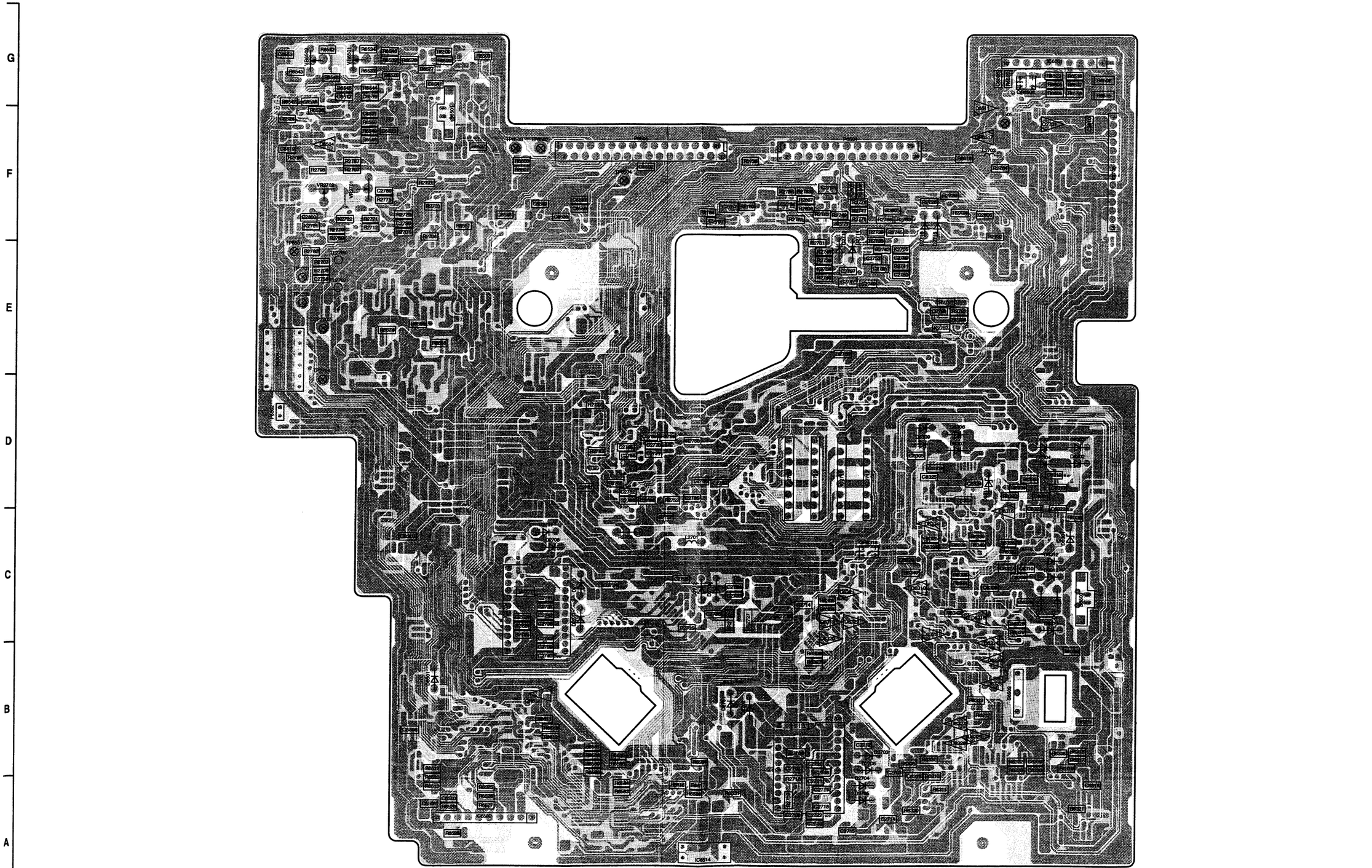


(FOIL SIDE)

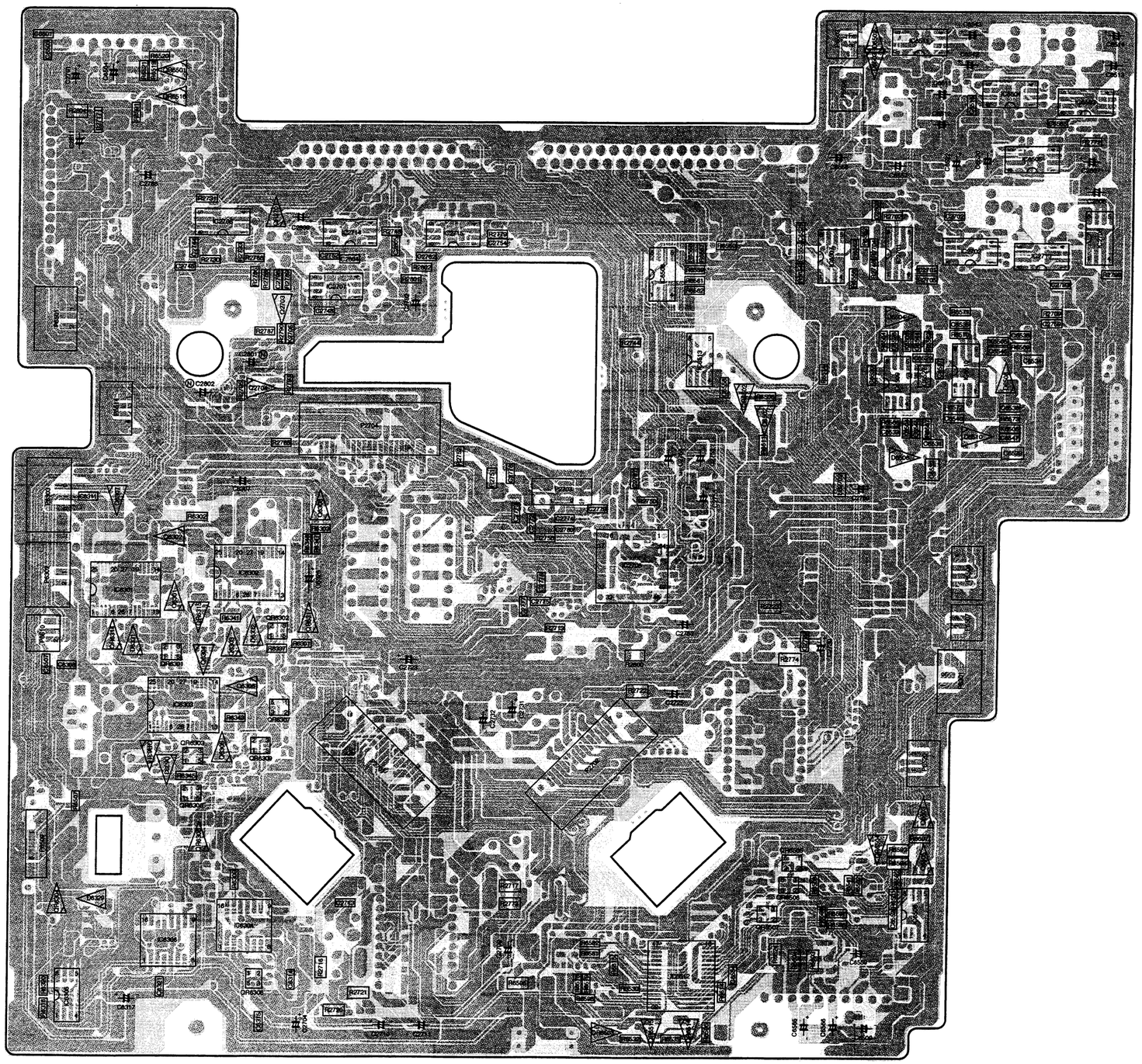
E D C B A

1 2 3 4 5 6 7 8 9 10

3-56. MECHANISM DRIVE C.B.A. (VEP02557A)



(COMPONENT SIDE)

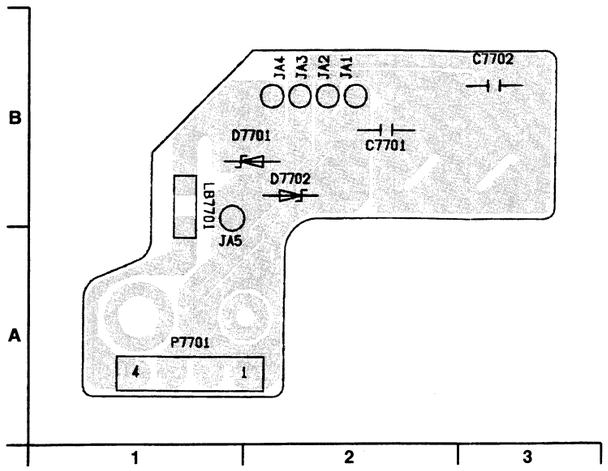


(FOIL SIDE)

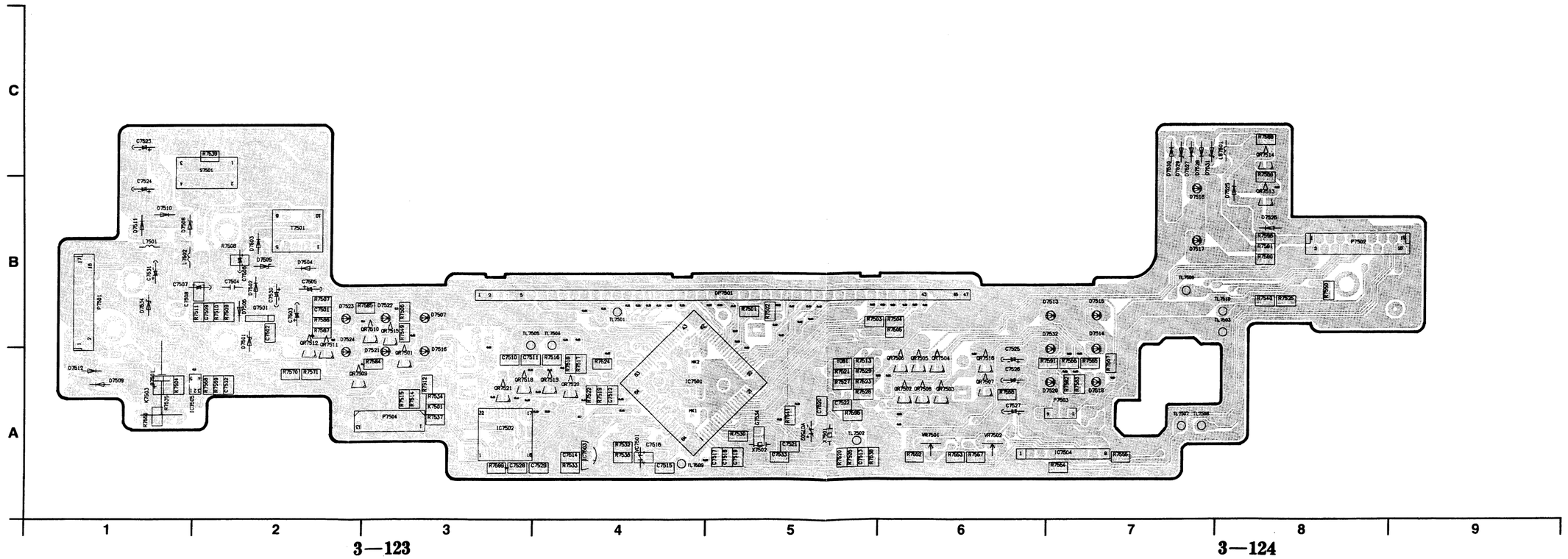
MECHANISM DRIVE C.B.A.	
Transistor	
Q2701	F-8
Q2703	E-12
Q2704	E-12
Q6301	D-12
Q6302	D-12
Q6303	C-12
Q6304	C-12
Q6305	C-12
Q6306	C-12
Q6307	D-11
Q6308	D-12
Q6502	E-15
Q6503	B-16
Q6504	F-3
Q6505	B-16
Transistor & Resistor	
QR2701	F-12
QR6301	C-12
QR6302	C-12
QR6303	C-12
QR6304	B-11
QR6305	B-12
QR6306	A-12
QR6307	C-12
QR6308	B-12
QR6309	C-12
QR6314	C-11
QR6315	C-12
QR6316	C-12
QR6317	C-12
QR6318	C-7
QR6501	G-12
QR6502	E-15
QR6503	A-14
QR6504	B-16
QR6505	B-15
QR6506	B-15
QR6507	B-15
QR6508	G-8
QR6511	B-4
QR6514	A-15
QR6515	A-15
QR6516	G-12
QR6517	F-8
Integrated Circuit	
IC2701	F-16
IC2702	F-16
IC2703	B-7
IC2704	C-4
IC2705	F-17
IC2706	F-12
IC2707	E-13
IC2708	D-14
IC2709	D-6
IC2710	D-6
IC2711	D-7
IC2712	D-7
IC2713	F-17
IC2714	F-13
IC2715	F-13
IC6301	D-11
IC6302	D-12
IC6303	C-12
IC6304	B-12
IC6305	A-11
IC6306	B-12
IC6502	A-4
IC6503	G-17
IC6504	G-17
IC6505	F-17
IC6506	B-16
IC6507	F-16
IC6508	F-15
IC6509	E-16
IC6510	E-16
IC6511	G-16
IC6512	A-15
IC6513	E-15
IC6514	A-6
Test Point	
TL2701	E-3
TL2702	E-3
TP2701	E-3
TP2702	E-3
TP2703	E-3
TP2704	E-3
TP6501	E-3
TP6502	F-4
TP6503	F-4
TP6404	F-5
TP6505	F-8
Adjustment	
VR2701	F-3
VR2702	F-3
VR6501	G-3
VR6502	G-3
Connector	
P2701	C-13
P2702	C-14
P2703	D-14
P2704	E-13
P2705	F-9
P6301	C-16
P6302	D-11
P6303	D-11
P6501	E-11
P6502	D-2
P6503	G-16
P6504	F-7
P6505	F-5
P6506	G-16
P6507	C-16
P6508	D-16
P6509	B-11
P6510	C-11
P6514	E-11
P6520	C-16

ADDRESS INFORMATION

3-57. IR C.B.A. (VEP07968A)

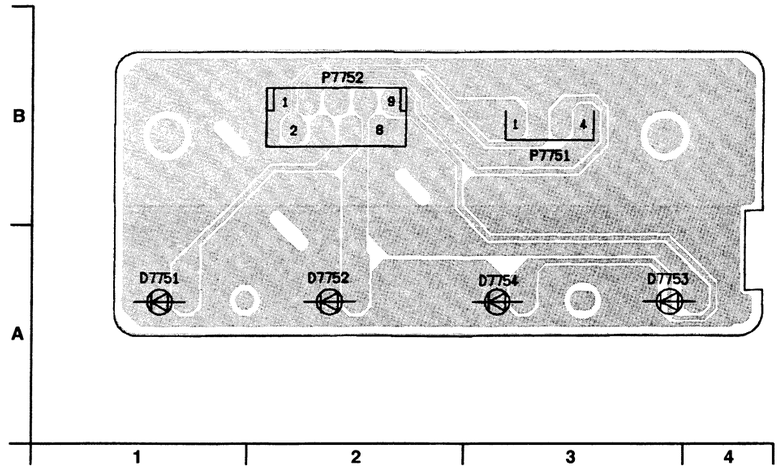


3-58. TIMER C.B.A. (VEP07A05A)



ADDRESS INFORMATION

3-59. FRONT LED C.B.A. (VEP07965A)



TIMER C.B.A.

Transistor	
Q7501	B-2

Transistor & Resistor	
QR7501	A-3
QR7502	A-6
QR7503	A-6
QR7504	A-6
QR7505	A-6
QR7506	A-6
QR7507	A-6
QR7508	A-6
QR7509	A-2
QR7510	B-3
QR7511	B-2
QR7512	B-2
QR7513	B-8
QR7514	C-8
QR7515	B-3
QR7516	A-6
QR7518	A-3
QR7519	A-4
QR7520	A-4
QR7521	A-3

Integrated Circuit	
IC7501	A-4
IC7502	A-3
IC7503	A-4
IC7504	A-7
IC7505	A-2

Test Point	
TL7501	B-4
TL7502	A-5
TL7503	B-8
TL7504	B-4
TL7505	B-3
TL7506	B-7
TL7507	A-7
TL7508	A-7
TL7509	A-4
TL7510	B-8

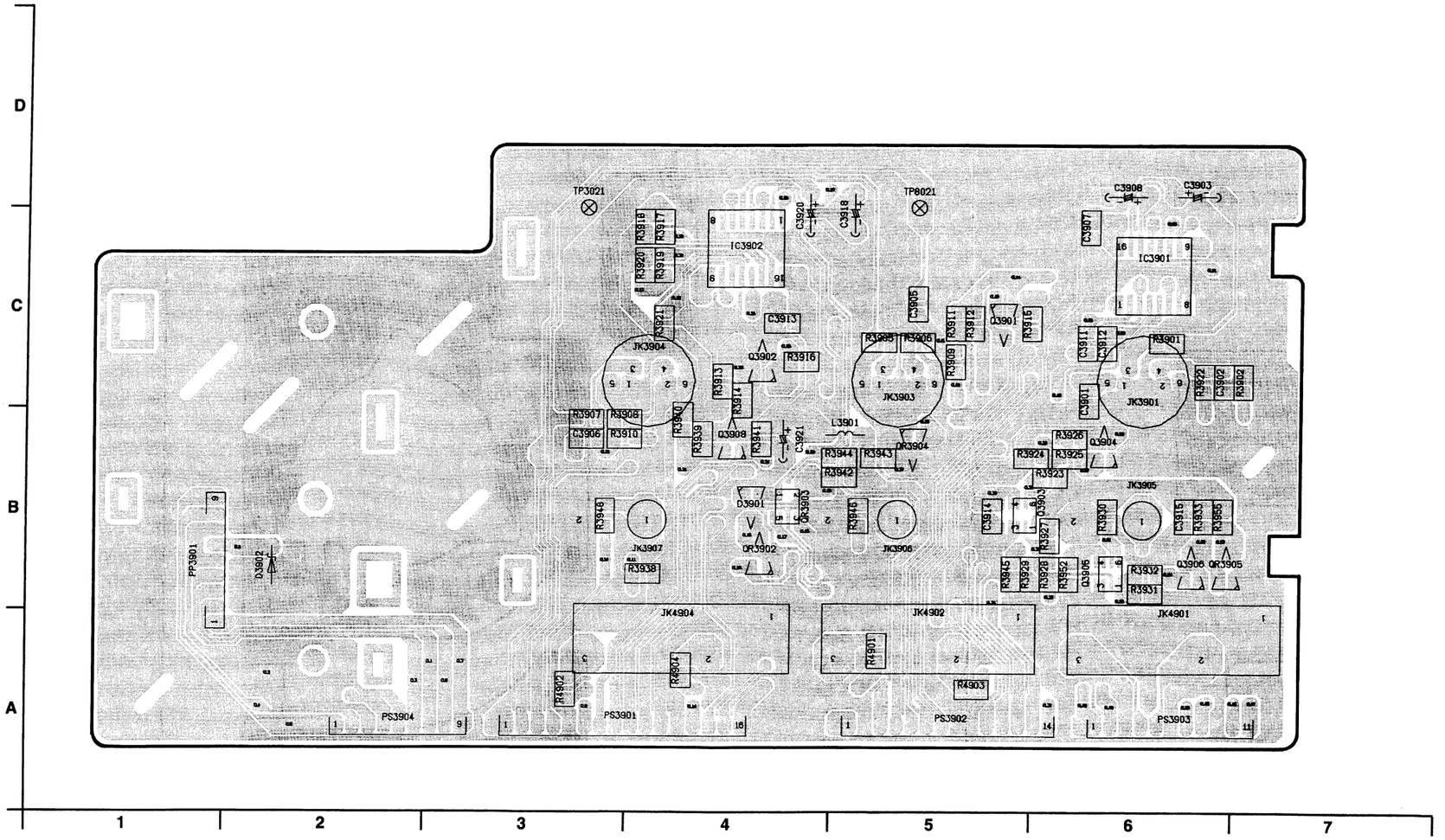
Adjustment	
VC7501	A-3
VC7502	A-5
VR7501	A-6
VR7502	A-6

Connector	
P7501	B-2
P7502	B-8
P7503	A-7
P7504	A-3

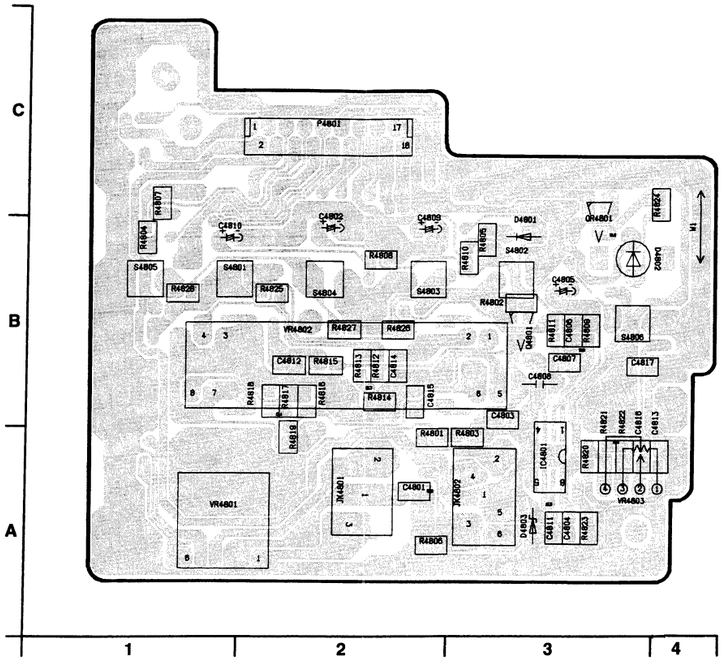
3-60. INPUT / OUTPUT C.B.A. (VEP03E90A)

INPUT/OUTPUT C.B.A.			
Transistor		**Integrated Circuit**	
Q3901	E-6	IC3901	E-8
Q3902	E-5	IC3902	C-5
Q3903	C-7	**Test Point**	
Q3904	D-8	TP3021	D-6
Q3905	C-8	TP8021	D-7
Q3906	C-8	**Connector**	
Q3907	B-7	PP3901	B-2
Q3908	B-5	PS3901	A-5
Q3909	B-7	PS3902	A-7
Transistor & Resistor		PS3903	A-9
QR3902	D-5	PS3904	A-3
QR3903	D-5		
QR3904	A-5		
QR3905	C-7		

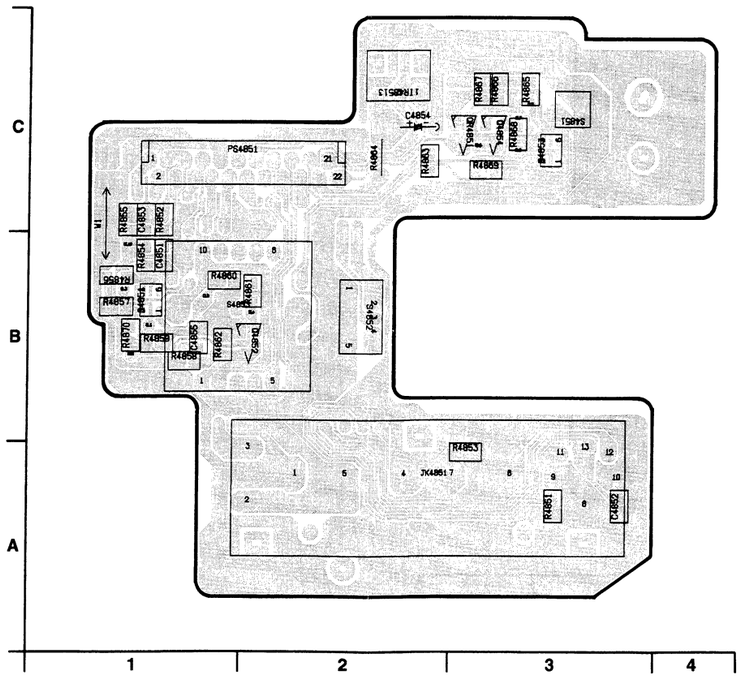
ADDRESS INFORMATION



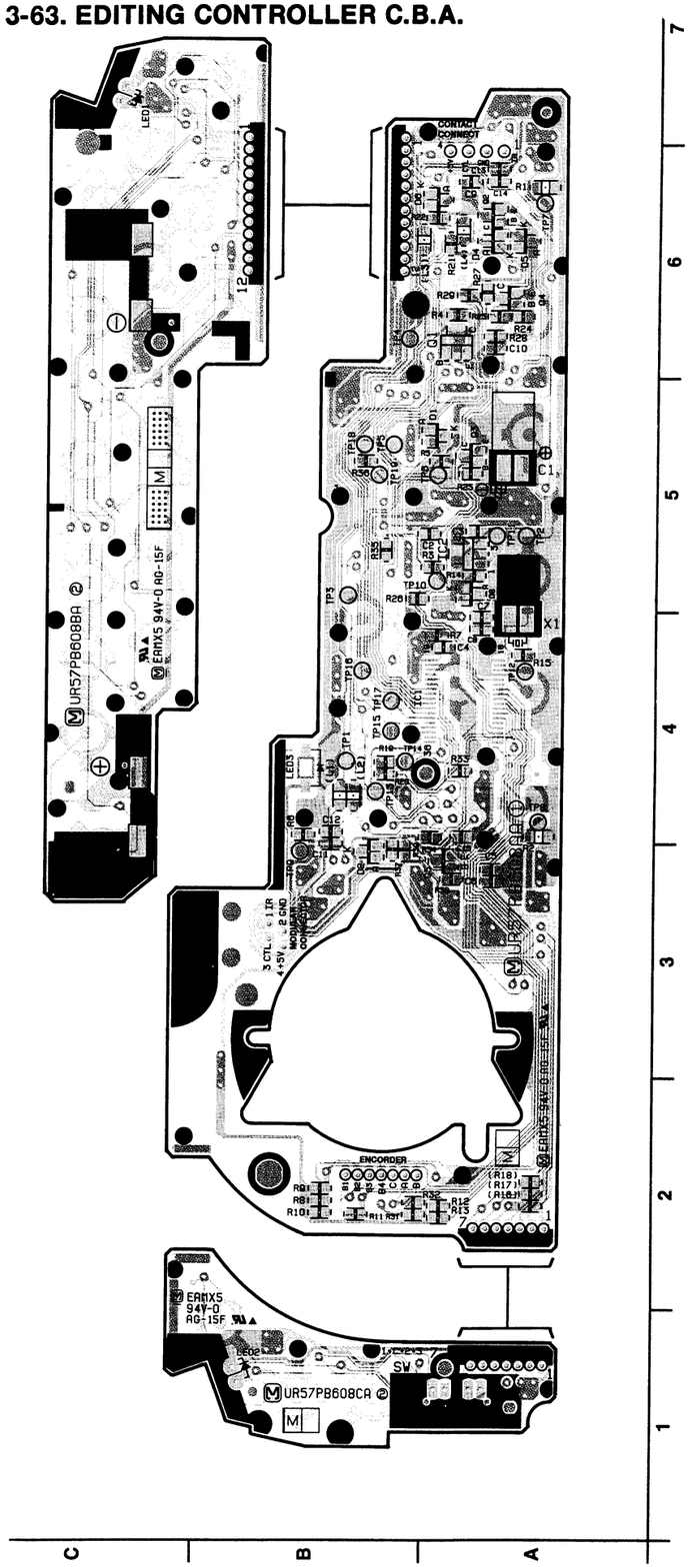
3-61. FRONT (L) C.B.A. (VEP03E90A)



3-62. FRONT (R) C.B.A. (VEP04728A)



3-63. EDITING CONTROLLER C.B.A.



ORDER NO. VSD9812M224B
D21

Service Manual

Volume. 2

V25299

Panasonic Mini DV DV

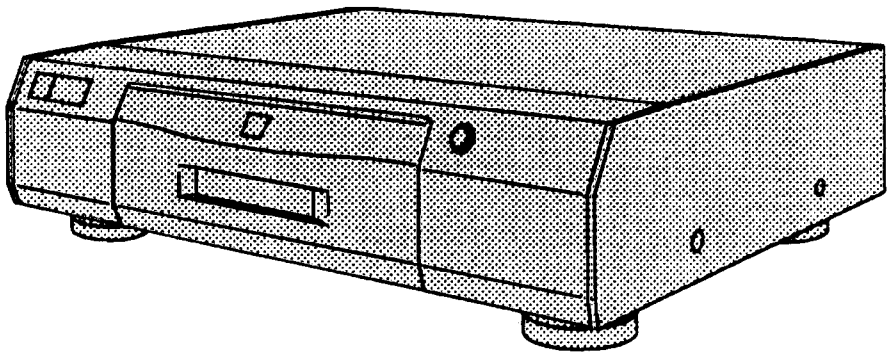
Digital Cassette Video Recorder

AG-DV2000P

Sec. 4 *Service Information*

Sec. 5 *Electrical Adjustment Procedures*

Sec.6 *Exploded Views/ Parts Lists*



Please refer to the Service Manual Model AG-DV2000P Volume 1 (Order No. VSD9812M224A) for Operating Instructions, Disassembly Procedures, Mechanical Adjustment Procedures, Block Diagrams, Schematic Diagrams and Circuit Board Diagrams.

Weight and dimensions shown are approximate.
Specifications are subject to change without notice

Panasonic

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

INTRODUCTION

This Service Manual Volume 2 contains technical information such as Service Information, Electrical Adjustment Procedures and Exploded Views / Parts Lists which service personnel to understand and service the Panasonic Digital Video Cassette Recorder model AG-DV2000P.

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CONTENTS

SECTION 4

SERVICE INFORMATION

CONTENTS

4. SERVICE INFORMATION

4-1. SERVICE INFORMATION DISPLAY

The Service Information Display on the front panel, there are four digits divided into 3 functions, Service mode, Service Data Number and Service Information Number.

This information aids trouble shooting by indicating the source of the malfunction. The service mode number and service data number are used by the technician during repair while the service information can be used by the consumer to diagnose malfunctions allowing the technical to provide a more accurate repair cost estimate and reduce repair time.

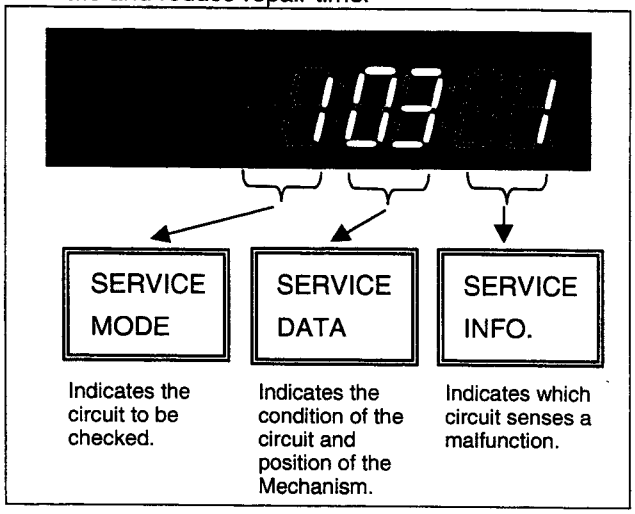


Fig. S1 Service Information Display

4-1-1. Set Service Mode

Press the FF and Eject button simultaneously.
The display will change "0.**:**
Pressing the FF and Eject button simultaneously will change the Service Mode Number as follows.

Mode 1: Check tape protection circuit
Mode 2: Check tape transport mechanism
Mode 3: Check mode switching operation
Mode 4: Check tray in / out operation
Mode 5: Check control buttons
Mode 6: Check mode switching and solenoid operations
Mode 7: Check loading / unloading operation

The first digit indicates which of the above 7 service modes that the unit is currently in.
The second and third digits are service data that indicate the condition of the circuit or mechanism being checked as shown in Figure S2.The forth digit is the service information display. It is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service mode and stores the fault indication in memory for as long as AC power is not supplied.

Service Mode No.	Service Data No.	Indication			
1 Tape Beg./End Detect	00	Light detected both sensors			
	01	Tape beginning. Light to S. sensor is blackened			
	02	Tape end. Light to T. sensor is blackened			
	03	No light detected either sensor.			
2 Mecha. Position Detect	03	Cassette down.			
	05	H/L position.			
	07	Middle position.			
	09	Stop position.			
	33	Tray open position.			
3 Process Mode Detect	0*,2*,3*	Tray-in-→Sstop.			
	6*	Stop-→Play			
	8*	Play-→Cue (F search)			
	9*	Play-→Rev (R search)			
	n*	Stop-→FF/REW			
	2*	Loading			
	L*	Unloading			
4 Tray Process Mode Detect	1*	Tray-in condition.			
	*2→*3→ *4→*00	Tray-out condition.			
5 Mode Detect	00	Stop			
	02	REW			
	03	FF			
	04	REV (R Search)			
	05	Cue (F Search)			
	08	Play			
	0U	Rec			
6 Mecha. Position Detect		Solenoid	Pinch	S reel	T reel
	1U	Stop	ON	OFF	OFF
	16	FF/REW	OFF	OFF	OFF
	2U	Tray In/Out	OFF	ON	ON
	29	Loading	OFF	OFF	ON
7 Check Load/ Unload Operation		The loading motor rotates for loading operation when the "PLAY" key is pressed and for unloading when "STOP" key is pressed. (Without cassette tape)			

Fig. S2 Service mode Number

4-1-2. Error Message

This VTR has a self-diagnosis and display function. If the VTR detects an error during operation, one of the following Error Message Codes will automatically appear on the and error display. Error Message codes are displayed in the form of a single English letter plus two numbers such as "H01".

Note:

1. The indication "H" of "F" is displayed on the FIP, and the power is automatically turned off.
   When the power is turned on again, the Fault Indication Code will disappear and the unit will return to normal display mode (either clock or counter).
2. This Error Message Code will be stored in the Timer microprocessor even with the AC plug disconnected.
   The two-digit number portion of the stored Code Message Code can be redisplayed on the display's "second" display position (the last 2 digits on the light) by placing the unit is Service Mode Number 2 when turning on Service Information Display as foe example "01" or "02" etc.
   If a second error occurs, only the most recent error will be displayed and stored.
   To erase the stored Error Message Code data, press "FF" and "Eject" button simultaneously more than 5 seconds.

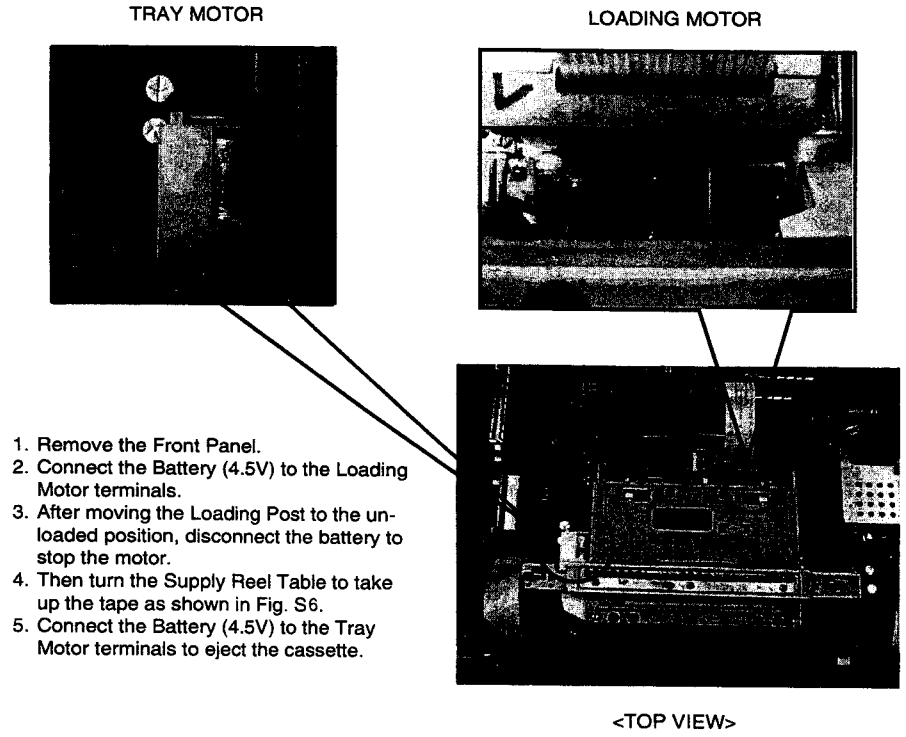
Error		Condition	Cause	Remedy/Check
H	H01	Cylinder Lock	After Cylinder lock is detected, the Cylinder does not start rotating again even after tape unloading.	Check the cylinder drive
	H02	Capstan Lock	Cassette tape is not wound up during tape unloading.	Check the capstan drive
F	F03	Loading Lock	Mechanism locks during tape loading.	1. Check the loading drive. 2. Check the mode switch and Gears phase on the mechanical chassis.
	F04	Unloading Lock	Mechanism locks during tape unloading.	
	F05	Reel FG Detection	Detects abnormal condition during tape loading / unloading.	Check the tension sensors, S reel and T reel drive.
	F06	Tray In Lock	Tray Motor locks during Tray In.	1. Check the tray drive. 2. Check the gears phase on the tray section.
	F07	Tray out lock	Tray Motor locks during Tray Out.	
	F08	Tension Sensor Detection	Detects abnormal condition during tape loading.	Check the tension sensor, S reel and T reel drive.

Fig. S3 Self-Test Indication Display

4-2. MANUAL EJECT

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually.
There are 2 methods to remove the cassette as follows.

4-2-1. Battery Operation

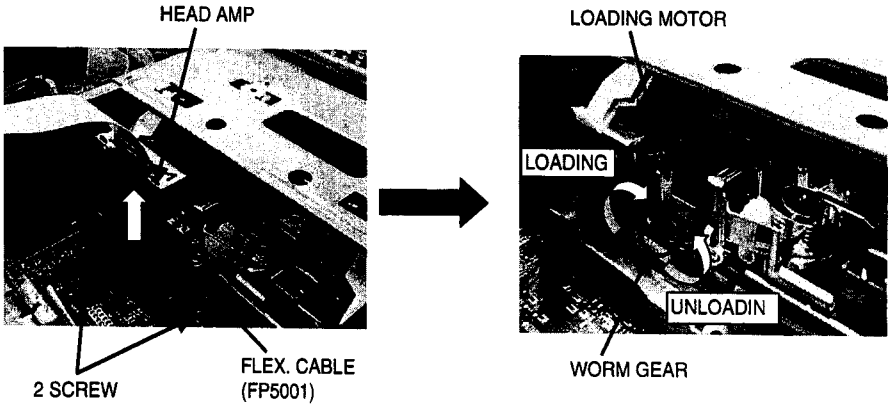


1. Remove the Front Panel.
2. Connect the Battery (4.5V) to the Loading Motor terminals.
3. After moving the Loading Post to the unloaded position, disconnect the battery to stop the motor.
4. Then turn the Supply Reel Table to take up the tape as shown in Fig. S6.
5. Connect the Battery (4.5V) to the Tray Motor terminals to eject the cassette.

Fig. S4

4-2-2. Hand Operation

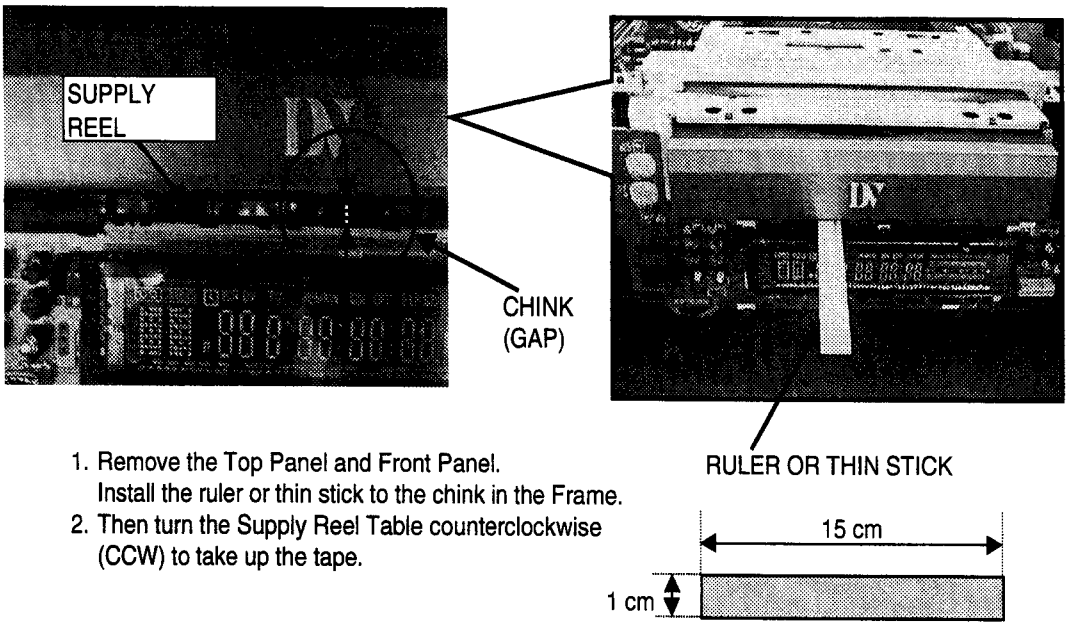
1. Unload the loading post by turning the loading motor



1. Remove the Head Amp Unit by removing 2 screws.
2. Disconnect the Flex. Cable after removing the Shield Case.
3. Then carfully turn the Worm Gear counterclockwise (CCW) by using the small driver.

Fig. S5

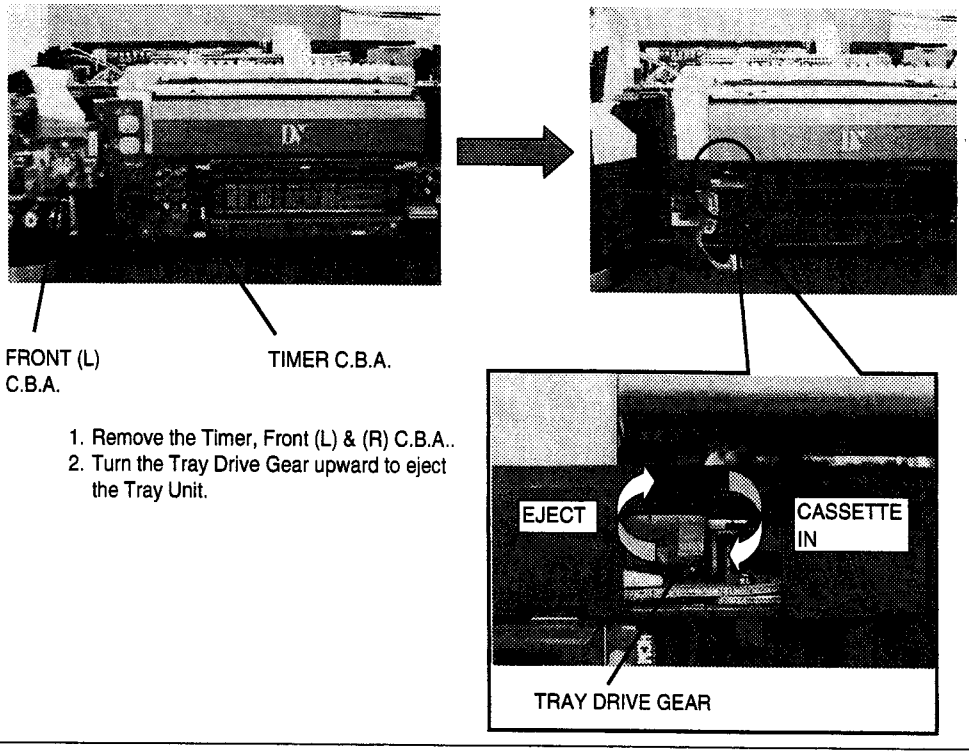
2. Take up the tape by turning the supply reel table



1. Remove the Top Panel and Front Panel.
   Install the ruler or thin stick to the chink in the Frame.
2. Then turn the Supply Reel Table counterclockwise (CCW) to take up the tape.

Fig. S6

3. Eject the tray by turning the tray motor



1. Remove the Timer, Front (L) & (R) C.B.A..
2. Turn the Tray Drive Gear upward to eject the Tray Unit.

Fig. S7

4-3. SPECIAL FIXTURESAND TOOLS

In order to keep the factory adjustment specifications, the following special tools should be used to conduct mechanical and electrical adjustments, and servicing.

4-3-1. Electrical Adjustments and Servicing

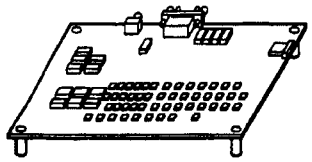
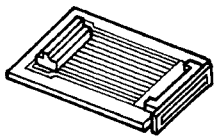
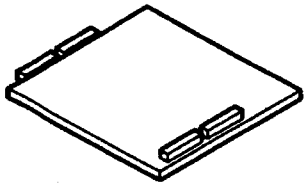
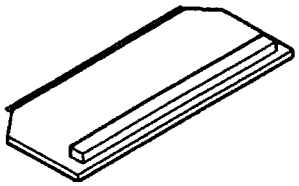
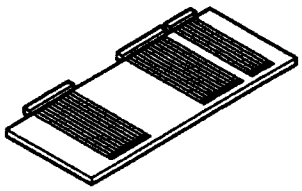
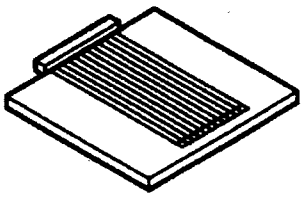
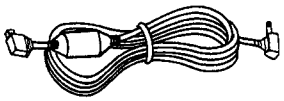
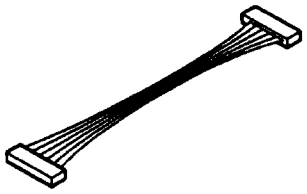
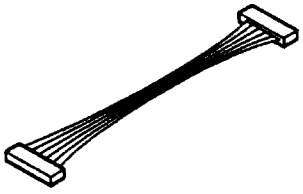
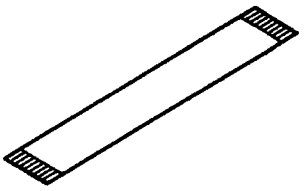
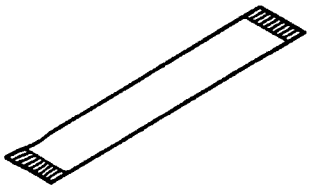
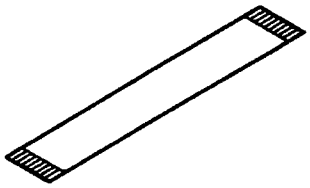
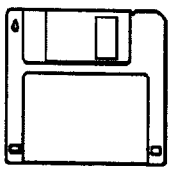
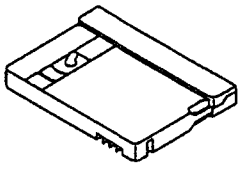
VFK1409 Measuring Board 	**VFK1410** Connection Board 	**VFK1317** 30pin Flat Cable (Needs 2 cables) 	Ordinary RS-232C Cross Cable 
VFK1405 Audio Extender Board 	**VFK1406** Digital Extender Board 	**VFK1407** Y/C Extender Board 	**VFK1408** Motor Extender Board 
VJA0941 DC Cable (For Measuring Board) 	**VFK1436** 14pin Extender Cable 	**VFK1448** 12pin Extender Cable 	**VFK1445** 26pin Flat Cable 
VFK1446 32 Flat Cable 	**VFK0849** 20pin Flat Cable 	**VFK1484** EVR Software 	**VFM3010EDS** Alignment Tape (Color Bar) 

Fig. S8

4-3-2. Mechanical Adjustments

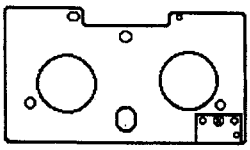
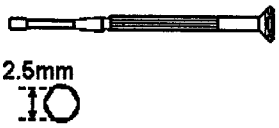
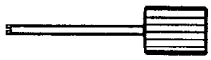
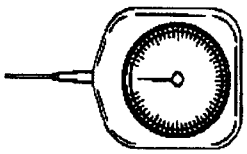
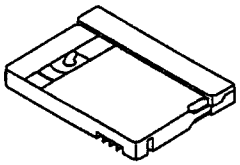
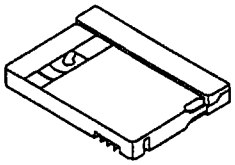
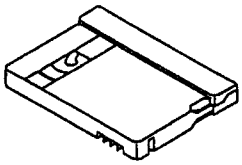
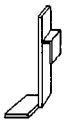
VFK1348A Neutral Plate 	**VFK1450** Post Height Fixture 	**VFK1151** Box Driver 	**VFK1149** Post Driver 
VFK1188 Dial Tension Gauge 	**VFK1217** 49% Sensor Cassette 	**VFK1426** 6% Sensor Cassette 	**VFM3010EDS** Alignment Tape (Color Bar) 
VFK1155 Neutral Position Tool (REV/White) 	**VFK1156** Neutral Position Tool (PLAY/Black) 	**VFK1208** Neutral Position Tool (NEUTRAL/ Black w/Hole) 	

Fig. S9

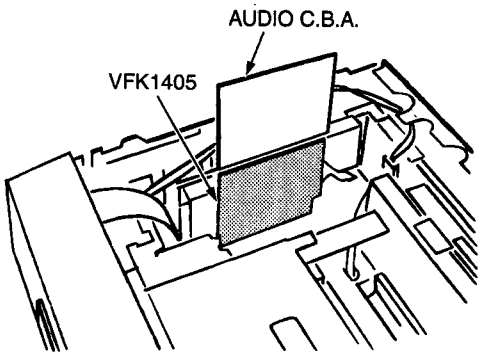
4-3-3. Extender Board and Cable

User the following Extender Boards and Cables when checking individual circuit boars or mechanical chassis unit.

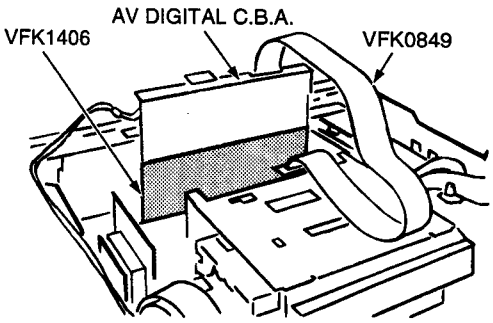
No.	Part No.	Part Name	Connection		Q'ty	Remarks
1	VFK1405	Audio Connection C.B.A.	Main C.B.A.	- Audio C.B.A.	1	
2	VFK1406	Digital Connection C.B.A.	Main C.B.A.	- AV Digital C.B.A.	1	
3	VFK1407	Y/C Connection C.B.A.	Main C.B.A.	- Analog Y/C C.B.A.	1	
4	VFK1408	Motor Connection C.B.A.	Main C.B.A.	- Motor Drive C.B.A.	1	
5	VFK0849	20P Flat Cable	Digital FP3201	- Head Amp FP5002	1	
6	VFK1445	26P Flat Cable	Main P6703	- Mech. P6504	1	
7	VFK1446	32P Flat Cable	Main P6701	- Mech. P6505	1	
7	VFK1436	14P Extension Cable	Motor Power P2502	- Mech. P2705	2	
9	VFK1448	12P Extension Cable	Main P6707	- Power P1102	1	

Fig. S10

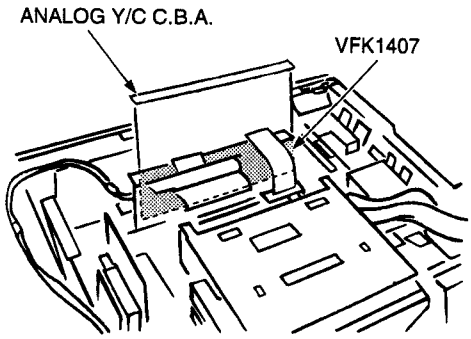
4-3-4. Usage of Extender Board and Cable



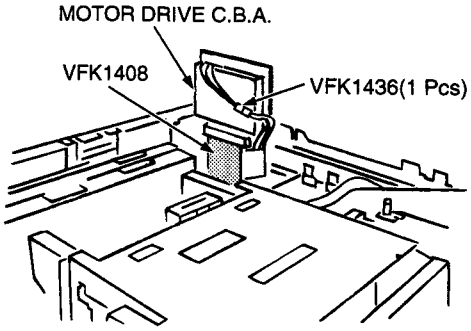
(a) AUDIO C.B.A.



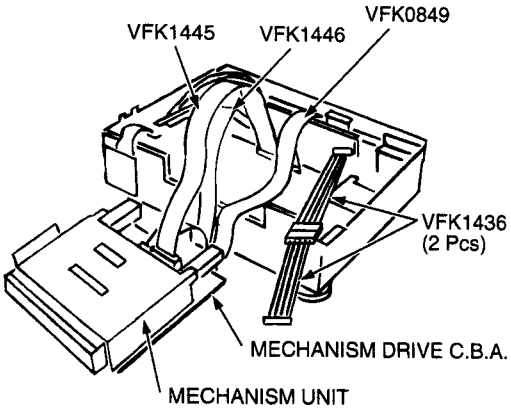
(b) AV DIGITAL C.B.A.



(c) ANALOG Y/C C.B.A.



(d) MOTOR DRIVE C.B.A.



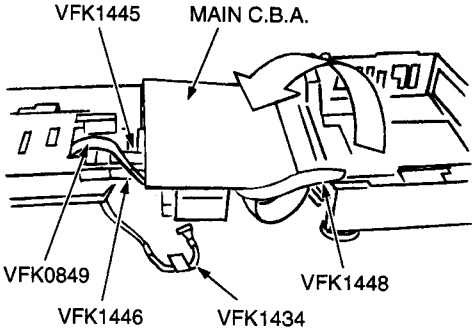


Fig. S11

4-3-5. Summary Table of Special Fixtures and Tools

Part No.	JIG & EQUIPMENT	DVCPRO	AG-EZ30/20	PURPOSE	REMARK
VFK1409	Measuring Board	N	N	Part of PC EVR System	New
VFK1410	Connection Board	N	N	Part of PC EVR System	New
VFK1317	30pin Flat Cable	N	Y	Part of PC EVR System	
VFK1405	Audio Extender Board	N	N	Extension of Audio Board	New
VFK1406	Digital Extender Board	N	N	Extension of Digital Board	New
VFK1407	Y/C Extender Board	N	N	Extension of Analog Y/C Board	New
VFK1408	Motor Extender Board	N	N	Extension of Motor Drive Board	New
VJA0941	DC Cable	N	Y	DC Power Supply to VFK1409	New
VFK1436	14pin Extender Cable	N	N	Extension of Motor Drive Board	New
VFK1448	12pin Extender Cable	N	N	Extension of Main Board	New
VFK1445	26pin Flat Cable	N	N	Extension of Main Board	New
VFK1446	32pin Flat Cable	N	N	Extension of Main Board	New
VFK0849	20pin Flat Cable	N	N	Extension of Mecha. Chassis	New
VFK1484	EVR Software	N	N	Program for PC EVR System	New
VFM3010EDS	Alignment Tape (C Bar)	Y	Y	General Confirmation	
VFK1348A	Neutral Plat	Y	N	Post Height Adjustment	New
VFK1450	Post Height Fixture	N	N	Post Height Adjustment	New
VFK1151	Box Driver	Y	N	Post Height Adjustment	
VFK1149	Post Driver	Y	Y	Post Height Adjustment	
VFK1188	Dial Tension Gauge	Y	N	Tape Tension Adjustment	
VFK1217	49% Sensor Cassette	N	Y	Sensibility of Tape Beg/End Detector Adjustment	
VFK1426	6% Sensor Cassette	N	N	Sensibility of Tape Beg/End Detector Adjustment	New
VFK1155	Neutral Position Tool (White)	Y	N	Tape Tension Adjustment	
VFK1156	Neutral Position Tool (Black)	Y	N	Tape Tension Adjustment	
VFK1208	Neutral Position Tool (Hole)	Y	N	Tape Tension Adjustment	

Y : Can be used for DVCPRO or/and AG-EZ30/20, N : Cannot be used for DVCPRO or/and AG-EZ30/20

Fig. S12

4-4. PC EVR System

PC EVR System as shown in figure S13 is needed for some of electrical adjustment.

More details of the PC EVR System and adjustment procedures, please refer to the Electrical Adjustment Procedures Section (Section 2) in this service manual.

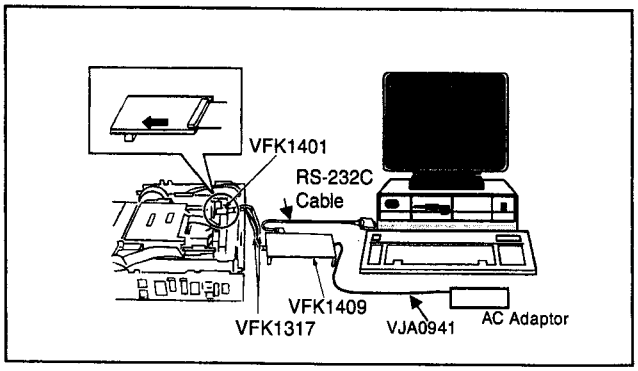


Fig. S13

SECTION 5

ELECTRICAL ADJUSTMENT

CONTENTS

5. ELECTRICAL ADJUSTMENT PROCEDURES

5-1. PREPARATION

To perform electrical adjustments completely, the following measuring equipment should be prepared.

5-1-1. Measuring Equipment

Equipment	Specification	
Dual-Trace Oscilloscope	Voltage Range	0.001 to 50V/Div.
	Frequency Range	DC to 100MHz
	Probes	10:1, 1:1
DVM (Digital Volt Meter)	Voltage Range	0.001 to 50V
Frequency Counter	Frequency Range	0 to 150MHz

Fig. E1

5-1-2. Special Fixtures and Tools

Please refer to the Service Information Section in this service manual.

5-1-3. PC EVR System

The table in figure E2 shows the all electrical adjustments, some of the adjustments need the PC EVR System.

Menu	Adjustment	Nasality of PC EVR System	Menu	Adjustment	Nasality of PC EVR System
SERVO ADJUSTMENT MENU	1. Reel Offset Adjustment	No	**VIDEO ADJUSTMENT MENU**	1. VCO 28MHz adjustment	No
	2. Tension Arm Offset Adjustment	No		2. Dot Lock Adjustment	No
	3 . Tension Arm neutral Adjustment	No		3. E-E Y Level (1) Adjustment	No
	4. Tension Arm Play Level Adjustment	No		4. E-E Y Level (2) Adjustment	No
	5. Tension Arm Rev Position Confirmation	No		5. Play C Level Adjustment	No
	6. Tension Arm Spring Adjustment	No		6. VCO 41MHz Adjustment	Necessary
	7. Reverse Tension Confirmation	No		7. RF / VITERBI Adjustment	Necessary
	8. PG Shifter Adjustment (Automatic)	Necessary		8. Video Input Y Level Adjustment	Necessary
	9. Sensitivity adjustment of tape sensors	No		9. Video Input C Level Adjustment	Necessary
				10. Horizontal Picture Position Adjustment	Necessary
				11. Write Product ID	Necessary
			AUDIO ADJUSTMENT MENU	1. Level meter adjustment	No

Fig. E2

Figure E3 shows the overall system connection of the PC EVR System.

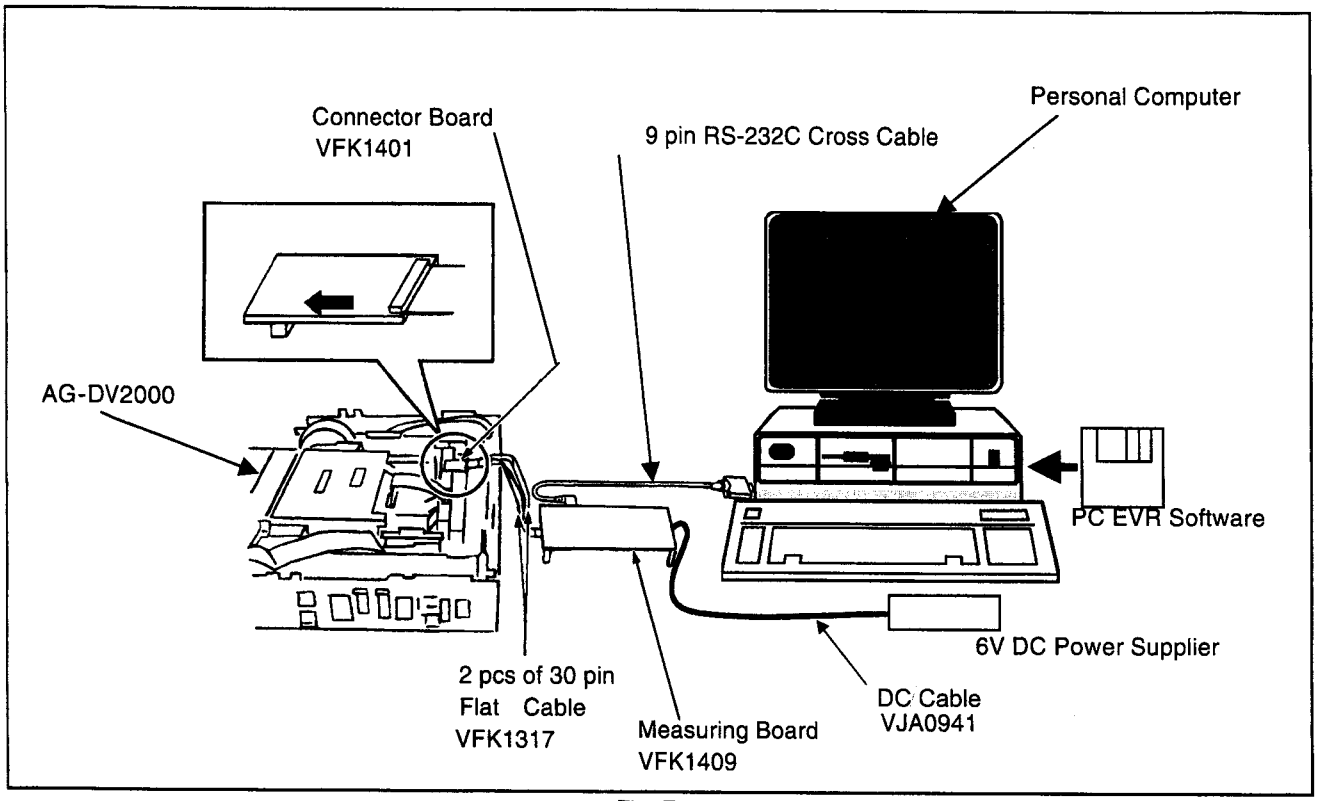


Fig. E3

5-2. PC EVR System Hook up Procedures

1. Connect 2 pcs of the 30 pin flat cables between the Measuring Board and EVR Connection Board as shown below.
2. Make sure that the contact surface of 2 pcs. of 30 pin Flat Cables are inner side and direction of the EVR Connection Board is as shown in figure E4.

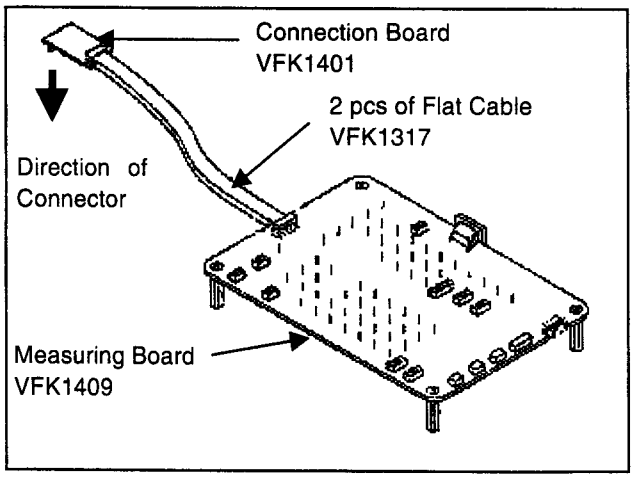


Fig. E4

3. Set the Connector Board with the 30 pin Cables to the unit as shown in Figure below.
   Make sure that the direction of the Connection Board is correctly fit.

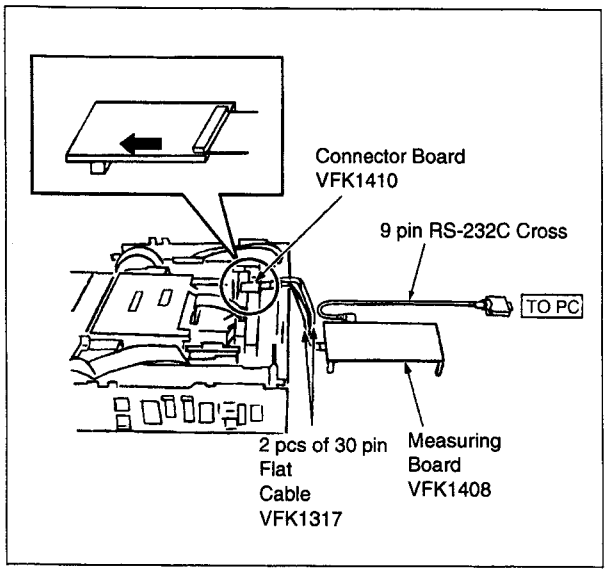


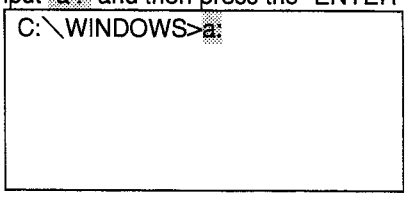
Fig. E5

4. Connect a 9 pin RS-232C cable between the Measuring Board and RS-232C connector on the Personal Computer as shown in figure E5.
5. Connect the 4 pin 6V/DC Power cable between AC adaptor or DC power supply unit..

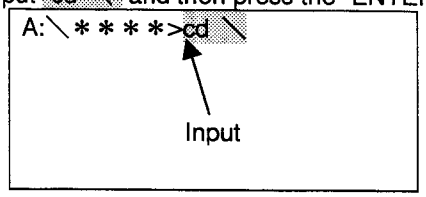
5-3. PC EVR SOFTWARE

5-3-1. BOOT UP THE SOFTWARE

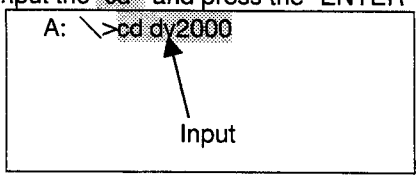
1. Power ON the Personal Computer.
   Windows 95 is set up (AUTO).
2. Restart the PC in Dos mode.
3. Insert the EVR software floppy disk into the FD drive of the PC.
4. Boot up the EVR program as the following steps.
   1) Input "a:" and then press the "ENTER" key.



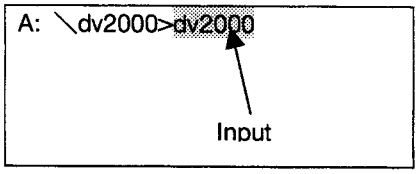
   2) Input "cd \" and then press the "ENTER" key.



   3) Input the "cd " and press the "ENTER" key.



   4) input the "dv2000" and then press the "ENTER" key.



5. Wait for a few seconds so that the EVR adjustment program is started.
6. For the adjustments, follow the program display.

5-3-2. How to Use the Main Menu

Select a Sub Menu to check, adjust the unit and etc. by pressing ↑ ↓ (UP/DOWN) Key in Main Menu. Then, press "ENTER" Key. The Sub Menu will be displayed.

Note: Menu (pages) 4 through 6 are needed for adjustment.

With using the keys, also the menu can be changed.

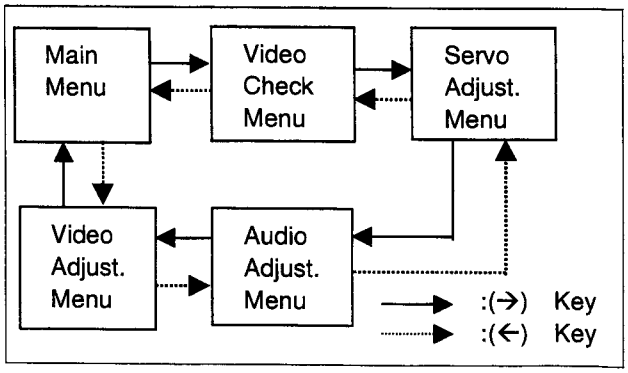


Fig. E6

5-3-3. Introduction of the Sub Menu

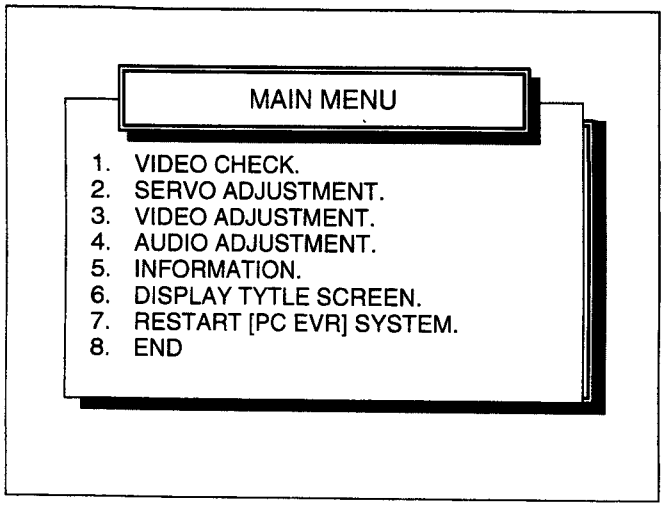


Fig. E7

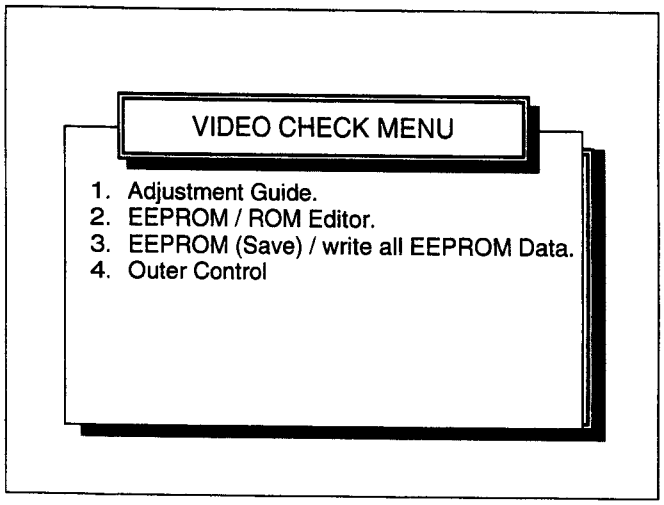


Fig. E8

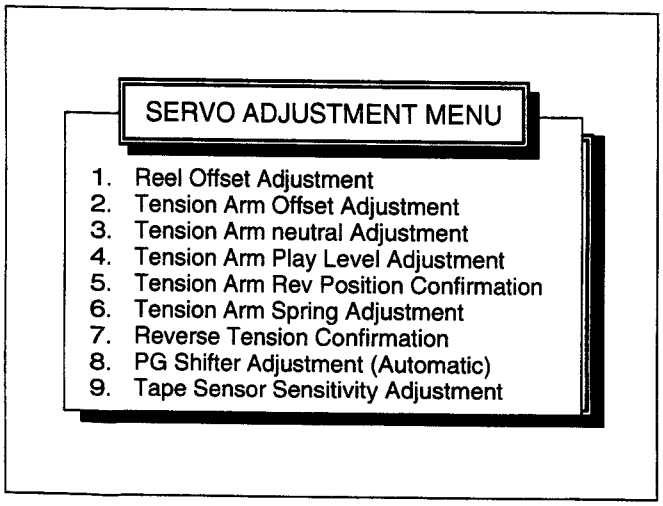


Fig. E9

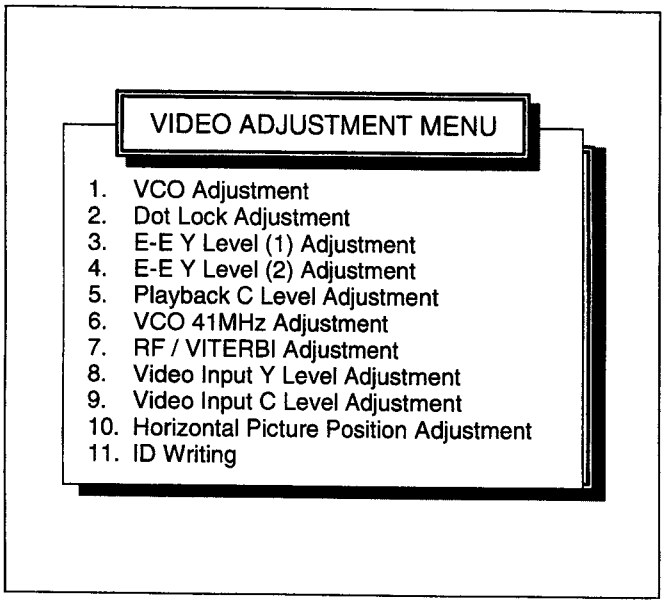


Fig. E10

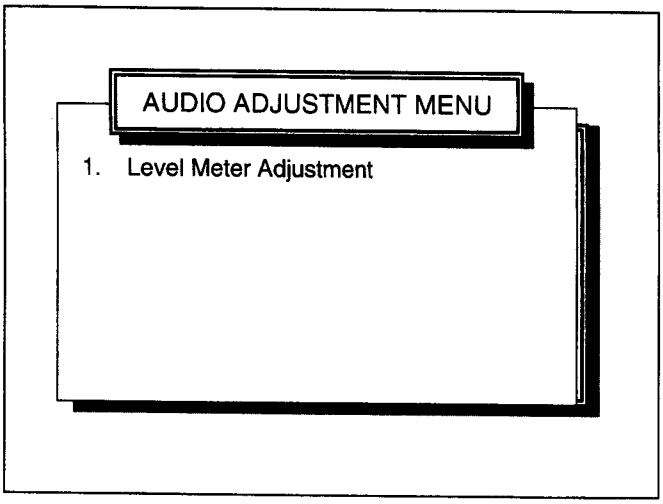


Fig. E11

5-3-4. Restoration of Connecting Error

This program checks connecting condition with the deck all the time.

When the deck power is off or reset, or cable is disconnected during servicing, restart the program by pressing "CTRL" key and "BREAK" key together.

5-3-5. EEPROM

Some of adjustment data have been stored in the EEPROM in the Digital C.B.A.

Be sure to save the EEPROM data into the personal computer before performing service and adjustment, in order to avoid any accidental data loss.

5-3-5-1. How to Save the EEPROM Data

1) Select "1. VIDEO CHECK" in the Main menu, and then press the "Enter" key.
2) Select "3. Read (Save) / Write All EEPROM data" in the Video check menu, and then press the "Enter" key.
3) Select "2. Save all EEPROM data" in Read (Save) / Write All EEPROM data menu, and then press the "Enter" key.
4) Input the File name, and then press "Enter" key.
   The data of EEPROM will be stored in the personal computer.

5-3-5-2. How to REWRITE Saved data

When it becomes impossible to adjust during service and adjustment, rewrite the saved data which stored in the personal computer and readjust.

1) Select "1. VIDEO CHECK" in the Main menu, and then press the "Enter" key.
2) Select "3. Read (Save) / Write All EEPROM data" in the Video check menu, and then press the "Enter" key.
3) Select "3. Writing from stored data file" in Read (Save) / Write All EEPROM data menu, and then press the "Enter" key.
4) Input the saved file name, and then press the "Enter" key.
5) The stored data is written in the EEPROM.

5-3-5-3. Digital C.B.A. Replacement

In case that the Digital C.B.A. is replaced, be sure to write the data to EEPROM on the Digital C.B.A. as follows.

1. Select "1. VIDEO CHECK" In the Main menu, and then press the "Enter" key.
2. Select "3. Read (Save) / Write All EEPROM data" in
3. the Video check menu, and then press the "Enter" key.
4. Select "3. Writing from stored data files." In Read (Save) / Write All EEPROM data menu, and then press the "Enter" key. Input the saved file name, and then press the "Enter" key.
   OR;
   Select "4. Writing of fixed / average values," and then press the "Enter" key. And press the "Enter" key once again.
   Then, input ID Number as follows.

5-3-5-4. How to Input ID Number

When writing ID Number from the saved data which is stored in 5-3-5-1.

1. Select "2. Check [Video]." In the Main menu, and then press the "Enter" key.
2. Select "3. Read (Save) / Write All EEPROM data" in the Video check menu, and then press the "Enter" key.
3. Select "5. Writing ID from the stored file." In Read [Save]/Write All EEPROM data menu, and then press the "Enter" key. Input the saved file name, and then press the "Enter" key.
4. The ID Number will be written automatically.

When the original ID information can not be read because of the destruction of EEPROM etc.:

1. Select "1. VIDEO ADJUSTMENT" in Main menu, and then press "Enter" key.
2. Select "9. Write products ID" in the Video adjustment menu, and then press the "Enter" key.
3. ID Number will be written automatically.
   (If the deck has no ID, it may cause problem on the IEEE1394 communication and etc.

5-4. ADJUSTMENT PROCEDURES

5-4-1. Servo Section

5-4-1-1. Reel Offset Adjustment

[Take up Reel Offset Adjustment]

TP	TP2701 (T ET), TP2702 (T GND)
ADJ.	VR2702 (T VR)
TAPE	Mini DV
TOOL	-------
MODE	Cassette Down (Stop)
M.EQ	D.V.M.
SPEC.	0 ± 1mV

[T Reel Offset Adjustment]

1. Set a cassette on the tray and make the cassette down condition.
2. Connect the Digital Volt Meter to TP2701 (T ET) and TP2702 (T GND).
3. Adjust VR2702 (T VR) so that the voltage is 0 ± 1mV

[Supply Reel Offset Adjustment]

TP	TP2703 (S ET), TP2704 (S GND)
ADJ.	VR2701 (S VR)
TAPE	Mini DV
TOOL	-------
MODE	Cassette Down (Stop)
M.EQ	D.V.M.
SPEC.	0 ± 1mV

[S Reel Offset Adjustment]

1. Set a cassette on the tray and make the cassette down condition.
2. Connect the Digital Volt Meter to TP2703 (S ET) and TP2704 (S GND).
3. Adjust VR2701 (S VR) so that the voltage is 0 ± 1mV.

[Tension Adjustment]

Flowchart in the figure below shows the tension adjustment steps.

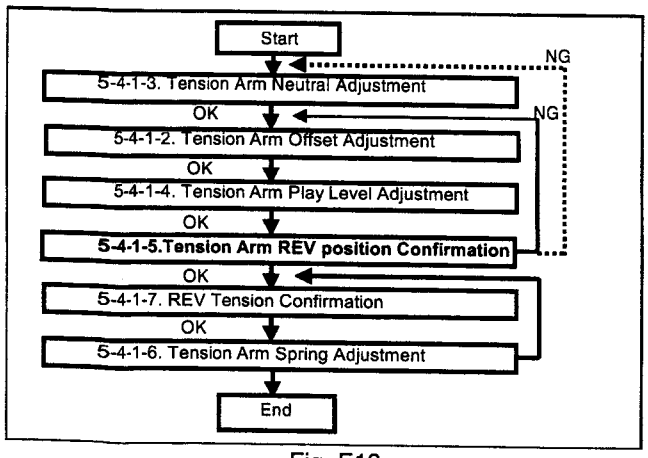


Fig. E12

5-4-1-2. Tension Arm Offset Adjustment

TP	TP6502 (TP2), TP6503 (TP3)
ADJ.	VR6501 (TEN SET)
TAPE	Mini DV
TOOL	-------
MODE	Cassette Down (Stop)
M.EQ	D.V.M.
SPEC.	0 ± 0.03V

1. Set a cassette on the tray and make the cassette down condition.
2. Connect the Digital Volt Meter to TP6502 (TP2) and TP6503 (TP3).
3. Adjust VR6501 (TEN SET) so that the voltage 0 ± 0.03V.

5-4-1-3. Tension Arm Neutral Adjustment

TP	TP6502 (TP2), TP6503 (TP3)
ADJ.	Tension Regulator Base
TAPE	-------
TOOL	VFK1208 (Black with Hole)
MODE	Loading Condition (Service Mode 7)
M.EQ	D.V.M.
SPEC.	0 ± 0.06V

1. Remove the Tray Unit.
2. Set VFK1208 (black with hole) on the Supply Post Base (A) as shown in Figure E14.
3. Place the unit into the no tape-loading mode by using the Service Mode described as follows.
   1. Press the "FF" and "Eject" buttons simultaneously in eight times to set the Service Mode No. 7.
   2. Place the mechanism in the loading condition as follows.
      (1) Close the tray close switch (S6501) on the Mechanism Drive C.B.A. by using adhesive tape as shown below.
      (2) Close the tray down switch (S6502) by depressing with your finger.
      (3) Press the PLAY button for the loading operation.
      (Press the STOP button for unloading.)
4. Connect the Digital Volt Meter to TP6502 (TP2) and TP6503 (TP3).
5. Loosen the screw (A).
6. Adjust the Tension Regulator Base so that the voltage is 0 ± 0.06V by moving the (D) portion with tweezers that are not magnetized.
7. Then tighten the screw (A).

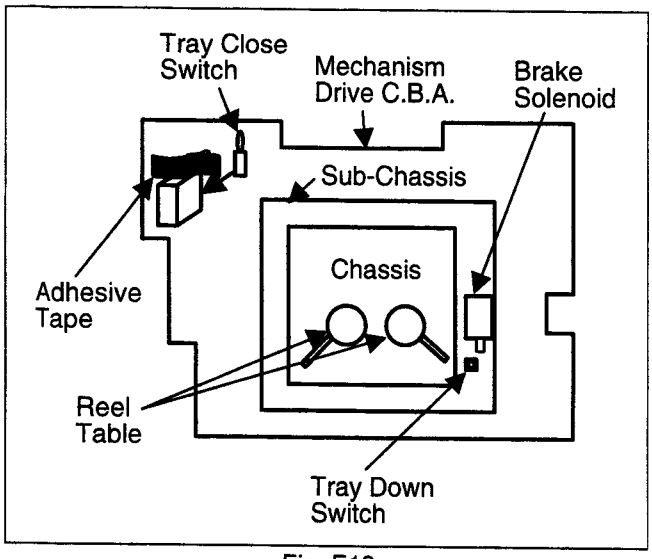


Fig. E13

<Caution>

Don't touch the S. Reel with magnetized driver or magnetized tweezers, when adjusting "D" portion.

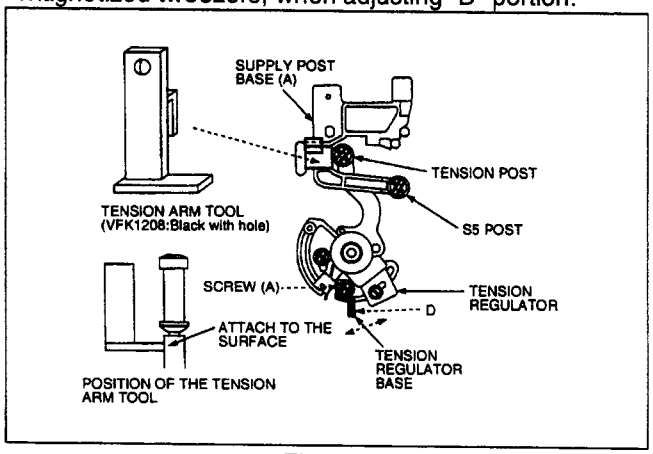


Fig. E14

5-4-1-4. Tension Arm Play Level Adjustment

	TP6502 (TP2), TP6503 (TP3)
ADJ.	VR6502 (TEN GAIN)
TAPE	-------
TOOL	VFK1156 (Black)
MODE	Loading Condition (Service Mode 7)
M.EQ	D.V.M.
SPEC.	0.92 ± 0.03V

1. Remove the Tray Unit.
2. Set VFK1156 (black without hole) on the Supply Post Base (A) as shown in Figure E15.
3. Place the unit into the no tape-loading mode by using Service Mode. (Refer to the step 3 of paragraph 5-4-1-3)
4. Connect the Digital Volt Meter to TP6502 (TP2) and TP6503 (TP3).
5. Adjust the VR6502 (TEN GAIN) so that the voltage is 0.92 ± 0.03V

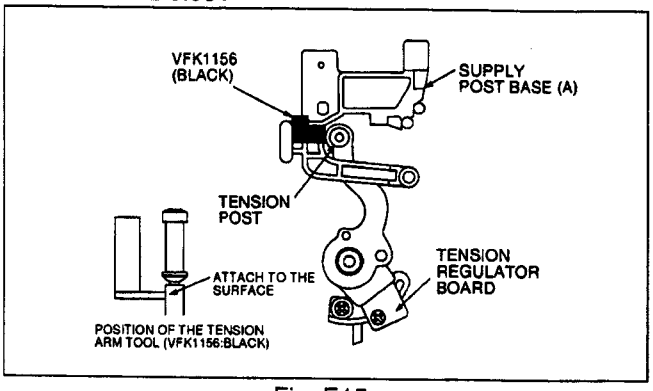


Fig. E15

5-4-1-5. Tension Arm REV position Confirmation

TP	TP6502 (TP2), TP6503 (TP3)
ADJ.	-------
TAPE	-------
TOOL	VFK1155 (White)
MODE	Loading Condition (Service Mode 7)
M.EQ	D.V.M.
SPEC.	-0.92 ± 0.2V

1. Remove the Tray Unit.
2. Sèt VFK1155 (white) on the Supply Post Base (A) as shown in Figure E16.
3. Place the unit into the no tape loading mode by using Service Mode. (Refer to step 3 of paragraph 5-4-1-3)
4. Connect the Digital Volt Meter to TP6502 (TP2) and TP6503 (TP3).
5. Confirm that the voltage is in the specification.
6. If it is out of the specification, readjust "5-4-1-3. Tension Arm Neutral Adj." and "5-4-1-4. Tension Arm Play Voltage Adjustment.".
7. If it is still out of specification, replace the Tension Post unit and readjust the Tension Arm Adjustment from "5-4-1-2. Tension Arm Offset Adjustment".

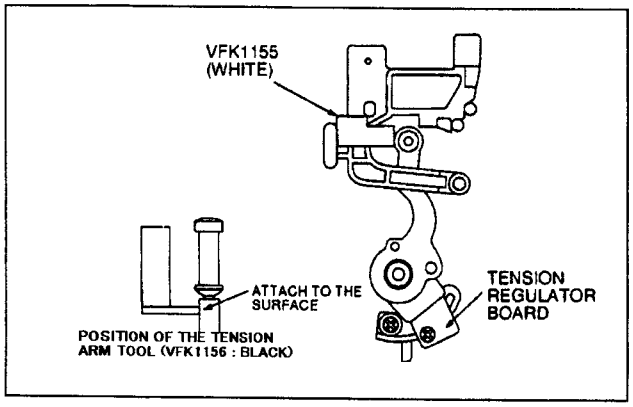


Fig. E16

5-4-1-6. Tension Arm Spring Adjustment

TP	TP6502 (TP2), TP6503 (TP3) Tension Post
ADJ.	Tension Regulator Spring Position
TAPE	-------
TOOL	VFK1188 (Dial Tension Gauge)
MODE	Loading Condition (Service Mode 7)
M.EQ	D.V.M., Dial Tension Gauge
SPEC.	0.92V (Play Position), 11 ± 1gf

1. Remove the Tray Unit.
2. Place the unit into the no tape loading mode by using Service Mode. (Refer to step 3 of paragraph 5-4-1-3)
3. Connect the Digital Volt Meter between TP6502 (TP2) and TP6503 (TP3)
4. When pressing the R portion of the Tension Post in arrow direction by Dial Tension gauge (VFK1188) until the voltage becomes 0.92V the Tension regulator Spring position (Hook B) so that the tension is in the specification 11 ± 1gf.
5. Tighten screw (C).

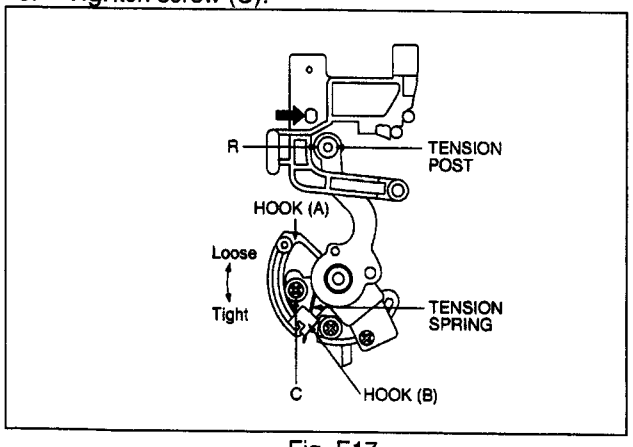


Fig. E17

5-4-1-7. REV Tension Confirmation

TP	TP6502 (TP2), TP6503 (TP3) Tension Post
ADJ.	Position of Tension Spring
TAPE	-------
TOOL	VFK1188 (Dial Tension Gauge)
MODE	Loading Condition (Service Mode 7)
M.EQ	D.V.M., Dial Tension Gauge
SPEC.	-0.92V (REV Position), 18 ± 2gf

1. Remove the Tray Unit.
2. Place the unit into the no tape loading mode by using Service Mode. (Refer to step 3 of paragraph 5-4-1-3)
3. Connect the Digital Volt Meter between TP6502 (TP2) and TP6503 (TP3).
4. When pressing the R portion of the Tension Post in arrow direction by Dial Tension Gauge (VFK1188) until the voltage becomes –0.92V (REV Position) as shown in Figure E18, confirm the tension is in the specification 18 ± 2gf.
5. If it is not, adjust "5-4-1-6. Tension Regulator Spring Adj." again.
6. Grew the screw A, B and C after Tension Arm Adjustment. The grew quantity at B portion is half of A and C portions as shown in Figure E18.

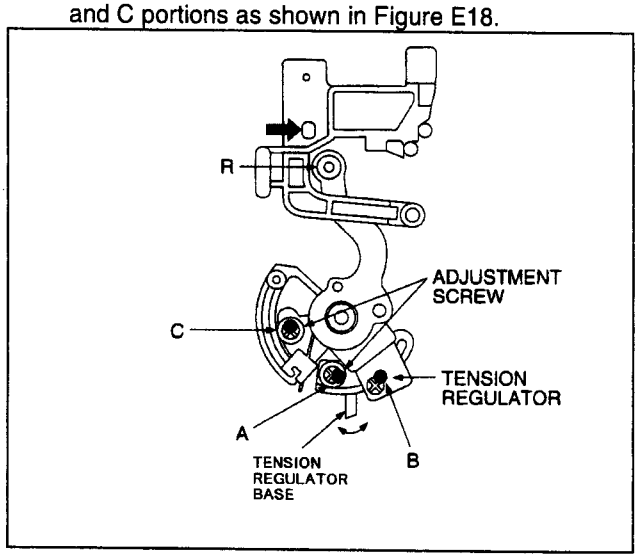


Fig. E18

5-4-1-8. PG Shifter Adjustment

TP	
ADJ.	PC EVR (AUTO)
TAPE	CCLOR BAR ALIGNMENT TAPE
INPUT	-------
MODE	PLAY
M.EQ	OSCILLOSCOPE
SPEC.	126.5 usec +/- 2usec

1. Set and boot the PC EVR System.
2. Set the LSI TEST Switch on the Measuring Board at the TEST position.
3. Connect the oscilloscope CH1 to HID1 test point on the Measuring Board and CH2 to SPA test point on the Measuring Board.
4. Play back the color bar alignment tape.
5. Press the "ENTER" key of PC so that PG shifter is automatically adjusted.
6. Make sure that the timing "A" is 126.5usec +/- 2usec.
7. Set the LSI TEST Switch on the Measuring Board at the NOR position.

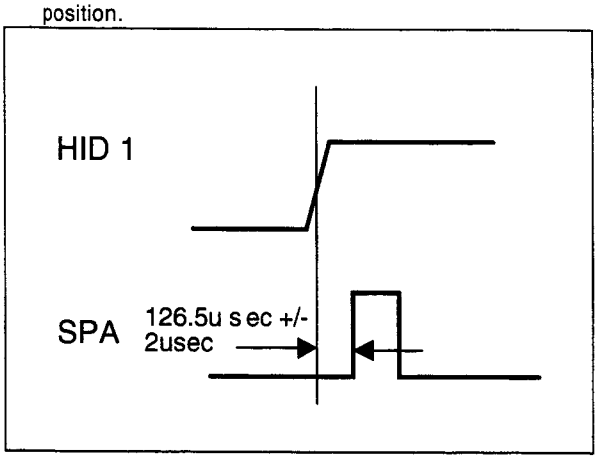


Fig. E19

5-4-1-8. Tape Sensor Sensitivity Adjustment

[Supply Photo Sensor Adjustment]

TP	TP6501, TP6504 (S Photo)
ADJ.	DIP SW (S6504)
TAPE	Sensor Cassette
TOOL	VFK1426 (6%), VFK1217 (49%), Sensor Cassette
MODE	Stop
M.EQ	D.V.M.
SPEC.	0.5 - 1.0V, Refer to Figure E7

1. Set all of the DIP SW (S6504) to ON.
2. Insert the 6% Sensor Cassette VFK1426.
3. Connect the Digital Volt Meter between TP6501 and TP6504 (S Photo).
4. Adjust the DIP SW as shown in Figure E20.
5. Confirm that the tape is not loaded when installing the 49% Sensor Cassette VFK1217.
6. If the tape is loaded when install the 49% Sensor Cassette readjust this adjustment.

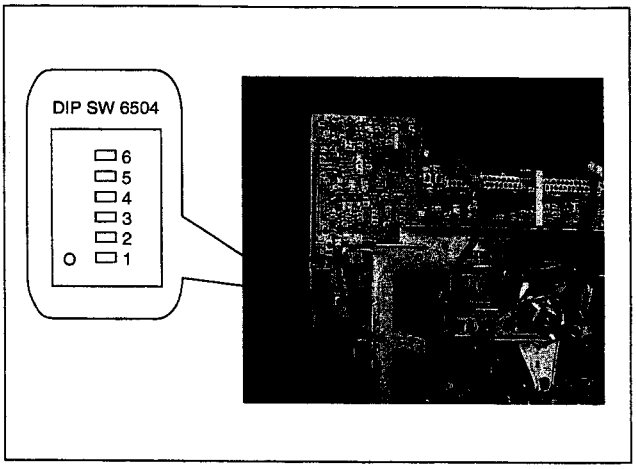


Fig. E20

[Take up Photo Sensor Adjustment]

TP	TP6501, TP6505 (T Photo)
ADJ.	DIP SW (S6504)
TAPE	Sensor Cassette
TOOL	VFK1426 (6%), VFK1217 (49%), Sensor Cassette
MODE	Stop
M.EQ	D.V.M.
SPEC.	0.5 - 1.0V, Refer to Figure E8

1. Set all of the DIP SW (S6504) to ON.
2. Insert the 6% Sensor Cassette VFK1426.
3. Connect the Digital Volt Meter between TP6501 and TP6505 (T Photo).
4. Adjust the DIP SW as shown in Figure E20.
5. Confirm that the tape is not loaded when installing the 49% Sensor Cassette VFK1217.
6. If the tape is loaded when install the 49% Sensor Cassette, readjust this adjustment.

[Supply Sensor]

TP6501-TP6504 VOLTAGE	DIP SW (S6504) ADJUSTMENT PROCEDURES	RESULT OF THE ADJUSTMENT	REMARKS
When the voltage is 0 - 0.5V	1. Change only SW6 to OFF 2. Change only SW5 to OFF 3. Change SW5 and 6 to OFF 4. Change only SW4 to OFF 5. Change SW4 and 6 to OFF 6. Change SW4 and 5 to OFF	If the voltage is not 0.5 – 1.0V, proceed to the item 2. If the voltage is not 0.5 – 1.0V, proceed to the item 3. If the voltage is not 0.5 – 1.0V, proceed to the item 4. If the voltage is not 0.5 – 1.0V, proceed to the item 5. If the voltage is not 0.5 – 1.0V, proceed to the item 6.	If the voltage is in the specification (0.5 – 1.0V), this adjustment is done.
When the voltage is 0.5 – 1.0V	This adjustment is not necessary.		
When the voltage is more than 1.0V	NG Replace the Supply Photo Sensor. Then readjust this adjustment.		

Fig. E21

[Take up Sensor]

TP6501-TP6505 VOLTAGE	DIP SW (S6504) ADJUSTMENT PROCEDURES	RESULT OF THE ADJUSTMENT	REMARKS
When the voltage is 0 - 0.5V	1. Change only SW1 to OFF 2. Change only SW2 to OFF 3. Change SW1 and 2 to OFF 4. Change only SW3 to OFF 5. Change SW1 and 3 to OFF 6. Change SW2 and 3 to OFF	If the voltage is not 0.5 – 1.0V, proceed to the item 2. If the voltage is not 0.5 – 1.0V, proceed to the item 3. If the voltage is not 0.5 – 1.0V, proceed to the item 4. If the voltage is not 0.5 – 1.0V, proceed to the item 5. If the voltage is not 0.5 – 1.0V, proceed to the item 6.	If the voltage is in the specification (0.5 – 1.0V), this adjustment is done.
When the voltage is 0.5 – 1.0V	This adjustment is not necessary.		
When the voltage is more than 1.0V	NG Replace the Take up Photo Sensor. Then readjust this adjustment.		

Fig. E22

5-4-2. Video Section

5-4-2-1. VCO (28MHz) Adjustment

TP	TP30006 / TP30005
ADJ.	T30001 (Y/C C.B.A.)
TAPE	----------
INPUT	Color Bar
MODE	E-E
M.EQ	Frequency Counter, DVM
SPEC.	28.636 +/- 0.05MHz

1. Remove the Analog Y/C board and remove the shield cover of the analog Y/C board.
2. Extend the Analog Y/C board with the Extender Board (VFK1407).
3. Supply an external 2.5V +/- 0.1VDC to TP30005 and GND.
4. Supply a standard color bar signal to the line (composite) input.
5. Connect the frequency counter to TP30006.
6. Adjust T30001 so that the frequency is 28.636MHz +/- 0.05MHz.
   Note: 1) The adjustment specification should be confirmed when the adjustment driver is away from T30001.
   2) Make sure that the adjusted position of the core of T30001 is lower end side, not upper end side.
7. Remove the DC supply cable from TP30005 and connect the volt meter to TP30005.
8. Confirm that the voltage at TP30005 is 2.5V +/- 0.1VDC.

5-4-2-2. Dot Clock Adjustment

TP	TP3801 (on analog C.B.A.)
ADJ.	VC3802 (on analog C.B.A.)
TAPE	----------
INPUT	----------
MODE	E-E
M.EQ	Frequency Counter
SPEC.	7.00MHz +/- 0.01MHz

1. Remove the Analog Y/C board and remove the shield cover of the analog Y/C board.
2. Extend the Analog Y/C board with the Extender Board (VFK1407)Connect a short jumper wire between TP3802 and GND (pin 28 of IC3801).
3. Connect the frequency counter to TP3801.
4. Adjust VC3802 so that the frequency is 7.00MHz +/- 01MHz.

5-4-2-3. E-E Y Level (1) Adjustment

TP	TP3021 (I/O C.B.A.) or S-Video Connector (Y)
ADJ.	VR30004 (Y/C C.B.A.)
TAPE	----------
INPUT	Color Bar to Y/C Input (S-Video)
MODE	E-E
M.EQ	Oscilloscope
SPEC.	TP3021 : 2.0Vp-p +/- 0.1V S-Video : 1.0Vp-p +/- 0.05V (with 75 ohm)

1. Open the OSD and set the 3D NR in the Standard mode.
2. Connect the oscilloscope to TP3021. (or Y output of S-Video Output with 75 ohm termination).
3. Adjust VR30004 so that Y level is 2.0Vp-p +/- 0.1V (1.0Vp-p +/- 0.05V at the Y output of S-Video Output with 75 ohm termination.)

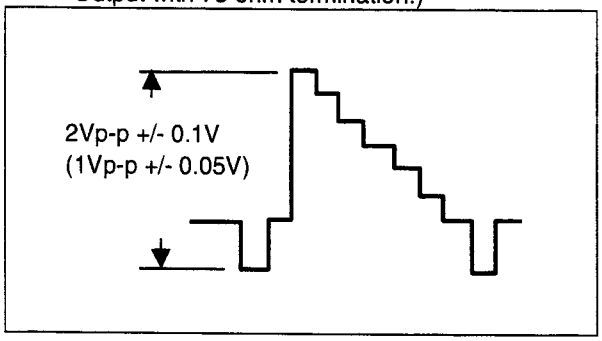


Fig. E23

5-4-2-4. E-E Y Level (2) Adjustment

TP	TP3021 (I/O C.B.A.) or S-Video Connector (Y)
ADJ.	VR30001
TAPE	----------
INPUT	Color Bar to Line Input
MODE	E-E
M.EQ	Oscilloscope
SPEC.	TP3021 : 2.0Vp-p +/- 0.1V S-Video : 1.0Vp-p +/- 0.05V (with 75 ohm)

1. Open the OSD and set the 3D NR in the Standard mode.
2. Connect the oscilloscope to TP3021. (or Y output of S-Video Output with 75 ohm termination). Adjust VR30001 so that Y level is 2.0Vp-p +/- 0.1V (1.0Vp-p +/- 0.05V at the Y output of S-Video Output with 75 ohm termination.)

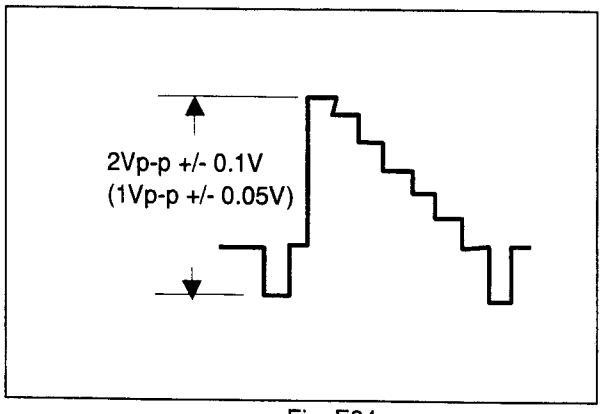


Fig. E24

5-4-2-5. Playback C Level Adjustment

TP	TPTP8021 (I/O CBA) or C out of S-Video
ADJ.	VR30002 (Y/C CBA)
TAPE	Color Bar Self Recorded Tape
INPUT	Standard Color Bar
MODE	REC/PB -→ PLAY
M.EQ	Oscilloscope
SPEC.	TP8021 : 572Vp-p +/- 40mV S-Video:286mV+/-20mmV (with 75 ohm Termination)

1. Open the OSD and set the 3D NR in the Standard mode.
2. Supply a standard color bar signal to the Line (composite) input and record it for a few minutes.
3. Play back the portion just recorded.
4. Connect the oscilloscope to TP8021. (or C output of S-Video Output with 75 ohm termination.).
5. Adjust VR30002 so that burst level is 572mVp-p +/- 40mV (or 286 mV +/- 20mV at the C output of S-Video Output with 75 ohm termination.)

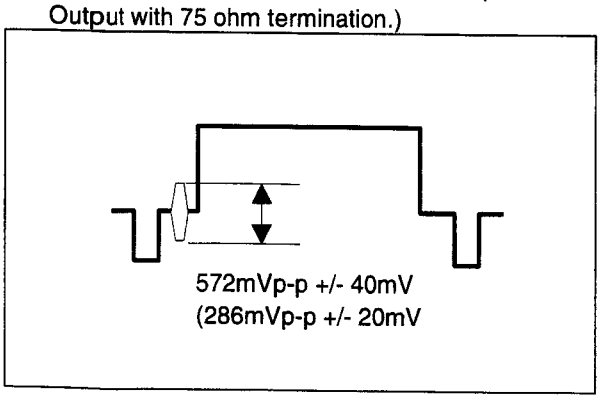


Fig. E25

5-4-2-6. VCO (41MHz) Adjustment

TP	[VCO] on Measuring Board
ADJ.	PC EVR (AUTO)
TAPE	----------
INPUT	----------
MODE	E-E
M.EQ	PC EVR System / Frequency Counter
SPEC.	41.85MHz +/- 200KHz

1. Set and boot the PC EVR System.
2. Set the LSI TEST Switch on the Measuring Board at the TEST position.
3. Place the deck in the E-E mode.
4. Press the "ENTER" key of PC so that VCO frequency is automatically adjusted.
5. Set the LSI TEST Switch on the Measuring Board at the NOR position.

5-4-2-7. RF / VITERBI Adjustment

TP	TP3008 (H.SW), VIDEO
ADJ.	PC EVR (AUTO)
TAPE	SP Color Bar Self Recorded Tape
INPUT	----------
MODE	----------
M.EQ	SCOPE
SPEC.	Less than 100 (L and R) (Auto)

1. Set and boot the PC EVR System.
2. Set the LSI TEST Switch on the Measuring Board at the TEST position.
3. Set a color bar SP self recorded tape onto the deck.
4. Press the "TAB" key on the adjustment mode so the automatic adjustment is performed.
5. Set the LSI TEST Switch on the Measuring Board at the NOR position.

5-4-2-8. Video Input Y Level Adjustment

TP	----------
ADJ.	PC EVR (AUTO)
TAPE	----------
INPUT	50% or 75% White Flat Field
MODE	Automatic
M.EQ	PC EVR System
SPEC.	Automatic

1. Set and boot the PC EVR System.
2. Set the LSI TEST Switch on the Measuring Board at the TEST position.
3. Supply 50% or 75% white flat field signal to the line (composite) input.
4. Press the "ENTER" key of PC in the PC EVR System.
5. Adjust the DAC so that the resister value is 7E +/- 2 (Hex) (50% color bar input) or B4 +/- 2 (Hex) (75% color bar input).
6. Set the LSI TEST Switch on the Measuring Board at the NOR position.

5-4-2-9. Video Input C Level Adjustment

TP	----------
ADJ.	
TAPE	PC EVR (AUTO)
INPUT	----------
MODE	Automatic
M.EQ	PC EVR System
SPEC.	Automatic

1. Set and boot the PC EVR System.
2. Set the LSI TEST Switch on the Measuring Board at the TEST position.
3. Supply 40% and same phase as burst signal color signal to the line (composite) input.

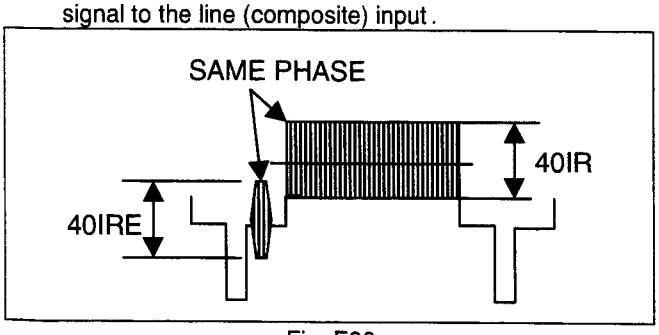


Fig. E26

4. Press the "ENTER" key of PC in the PC EVR System.
5. Adjust the DAC so that the resister value is 9A +/- 02 (Hex).
   Note: If the above signal is not available, input the average data.
6. Set the LSI TEST Switch on the Measuring Board at the NOR position.

5-4-2-10. Horizontal Picture Position Adjustment

TP	LINE OUT
ADJ.	PC EVR (AUTO)
TAPE	----------
INPUT	COLOR BAR
MODE	STOP / AUTO
M.EQ	Monitor TV
SPEC.	Less than 1mm on 20" monitor TV

1. Set the deck (A) to be adjusted, master deck which has been well adjusted (B) and monitor TV which has 2 inputs as shown in the figure below.
2. Connect a DV cable (IEEE1394) between the decks as shown in the figure below.
3. Supply a color bar signal to the deck (A) as shown in the figure below.

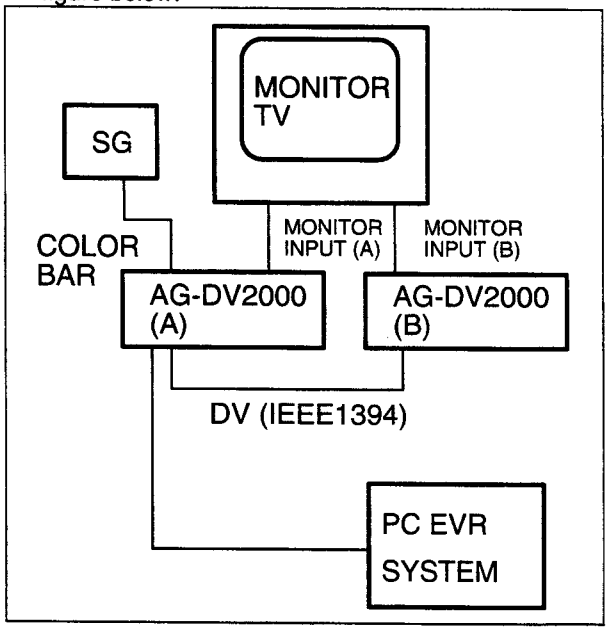


Fig. E27

4. Connect the PC EVR System to the deck (A) and boot it.
5. Set the LSI TEST Switch on the Measuring Board at the TEST position.
6. Alternately select the monitor input switch either (A) or (B) input and observe the E-E pictures of decks (A) and (B).
7. Adjust the data so that the horizontal position of E-E pictures (A) and (B) are equal (less than 1mm on 20" monitor TV).

8. Set the LSI TEST Switch on the Measuring Board at the NOR position.

5-4-2-11. ID Writing

Note : 1) The ID writing should be made only when the data in EEPROM have been changed.
2) If the deck dose not have an ID, communication problem may occur on the system of IEEE1394.

1. Set and boot the PC EVR System.
2. After completion of the preparation, press the ."ENTER" key of the PC.

(Please refer to paragraph 5-3-5-4. In mere details.)

5-4-3. Audio Section

5-4-3-1. Level Meter Adjustment

TP	VU METER
ADJ.	VR7501(L), VR7502(R)
TAPE	----------
INPUT	1kHz, -10dBv SINE WAVE
MODE	E-E
M.EQ	----------
SPEC.	0dB INDICATION

1. Supply 1KHz, -10dBv sine wave signal to the Audio L1 line inputs (R) and (L).
2. Set the audio level VR's at the center position.
3. Adjust VR7501(L) and VR7502(R) so that the audio VU meters indicate 0dB points.

SECTION 6

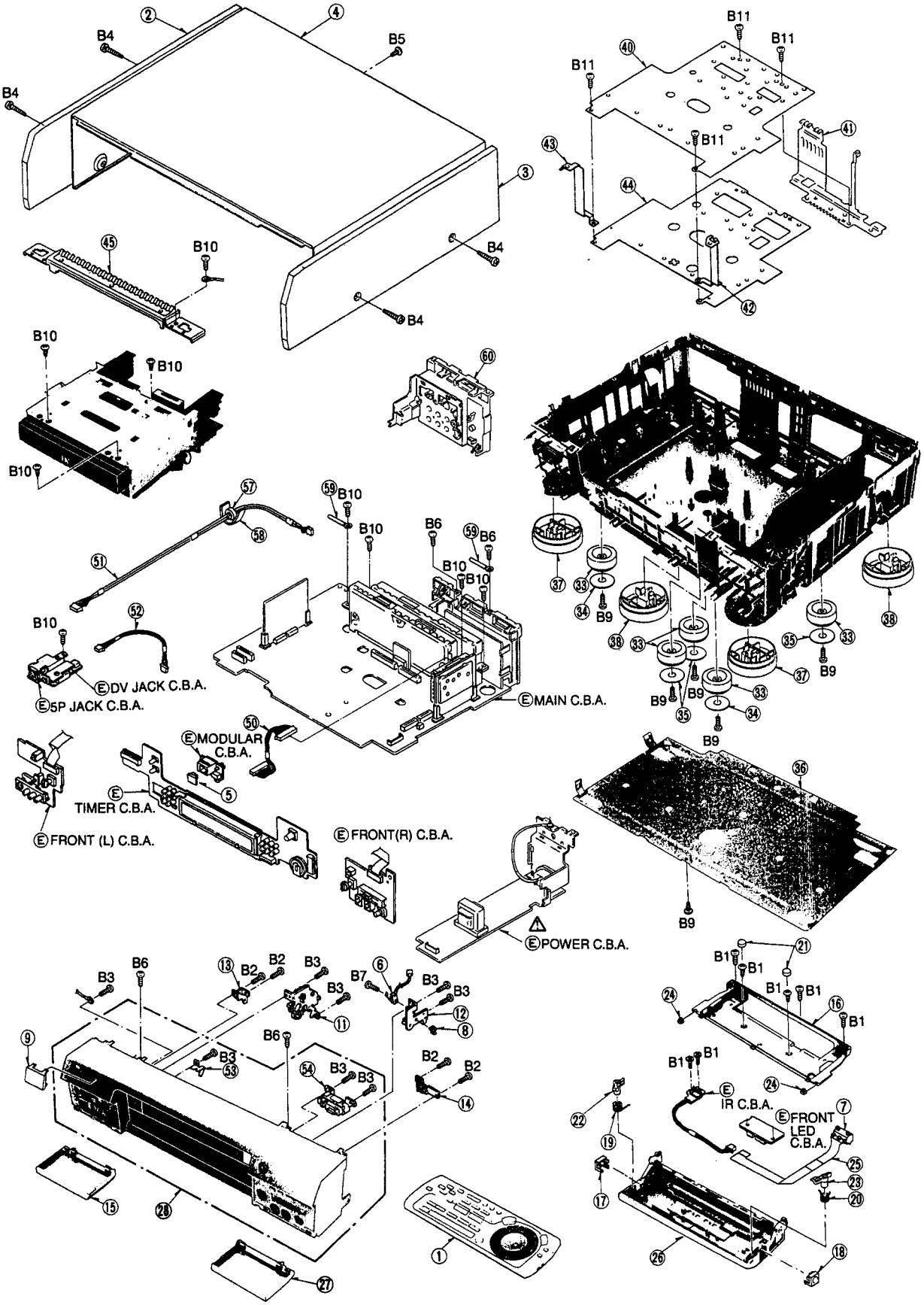
EXPLODED VIEWS
&
PARTS LISTS

CONTENTS

6.EXPLODED VIEWS & PARTS LIST

6-1.EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST

❶CASING PARTS SECTION

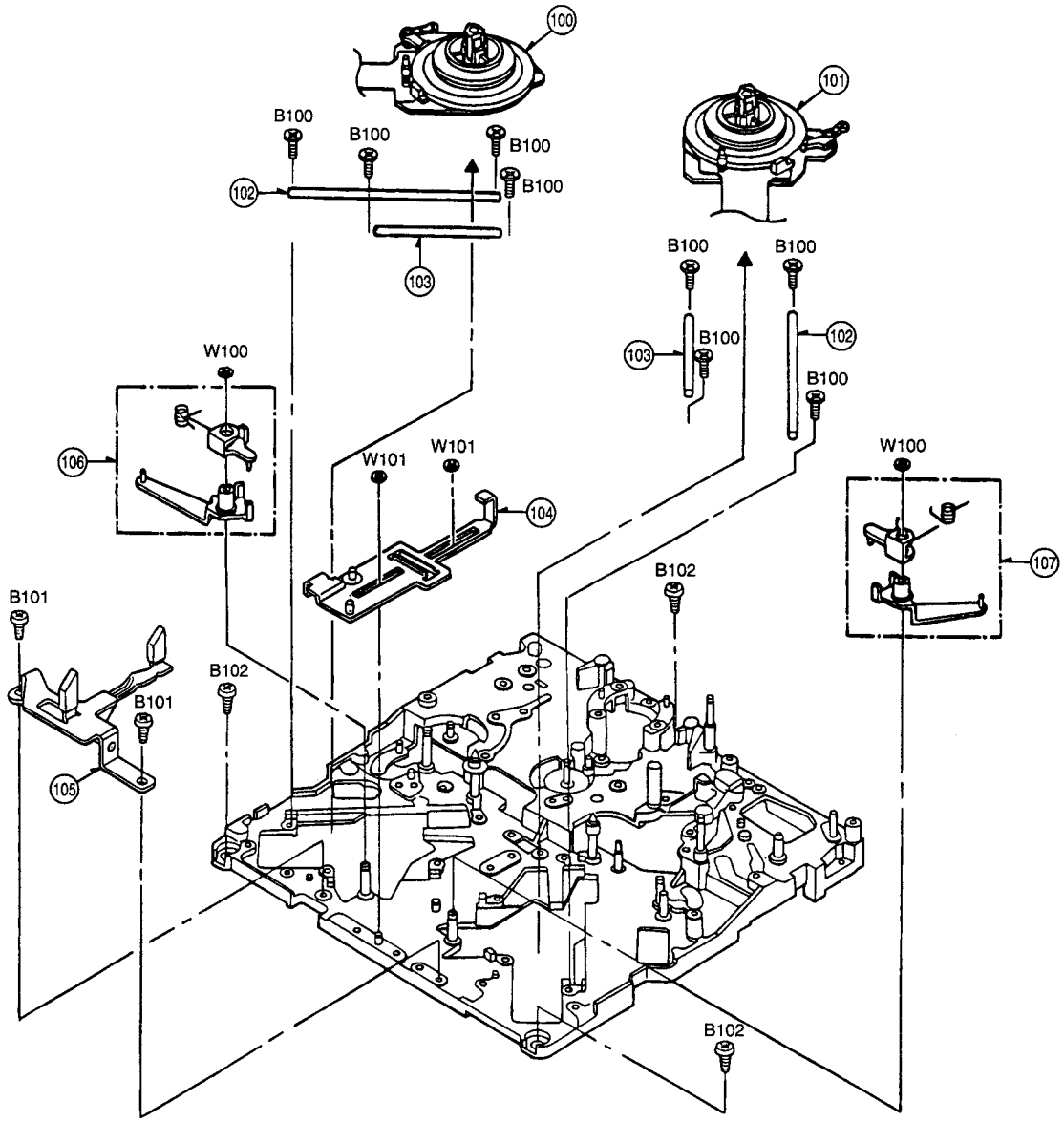


Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark △ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1	EUR571503	EDITING CONTROLLER	1	
2	VGK2447	SIDE PANEL (L)	1	
3	VGK2448	SIDE PANEL (R)	1	
4	VGM1493	TOP PANEL	1	
5	VGQ4455	MODULAR CAP	1	
6	VSP1082	FRONT SW ASS'Y	1	
7	VGQ2807	FLEXIBLE CABLE HOLDER	1	
8	VJF0496	CLAMPER	1	
9	VKW2399	IR WINDOW	1	
11	VXA6018	DOOR ANGLE (L) ASS'Y	1	
12	VXA6019	DOOR ANGLE (R)	1	
13	VXA6045	DAMPER ANGLE (L) ASS'Y	1	
14	VXA6046	DAMPER ANGLE (R) ASS'Y	1	
15	VYF2566	DOOR (L) ASS'Y	1	
16	VGP4571	DOOR PANEL	1	
17	VGU7567	LOCK BUTTON (L)	1	
18	VGU7568	LOCK BUTTON (R)	1	
19	VMB3186	LOCK LEVER SPRING (L)	1	
20	VMB3187	LOCK LEVER SPRING (R)	1	
21	VMG0837	RUBBER BUSH (A)	2	
22	VML3269	LOCK LEVER (L)	1	
23	VML3270	LOCK LEVER (R)	1	
24	VMT0212	CUSHION RUBBER	2	
25	VWJ1199	FLAT CARD CABLE (9P)	1	P7752-P7504
26	VYF2565	DOOR (C) 1 ASS'Y	1	
27	VYF2568	DOOR (R) ASS'Y	1	
28	VYP7097	FRONT PANEL (1) ASS'Y	1	
33	VKA0301	CERAMIC LEG	5	
34	VMG1031	LEG SHEET A	2	
35	VMG1049	LEG SHEET B	3	
36	VKU0528	BOTTOM PLATE	1	
37	VKA0310	LEG (F)	2	
38	VKA0311	LEG (R)	2	
40	VMZ2721	SHIELD SHEET	1	
41	VSC4755	SHIELD PLATE	1	
42	VSC4756	SHIELD PLATE (B3)	1	
43	VSC4757	SHIELD PLATE (B4)	1	
44	VSC4691	SHIELD PLATE	1	
45	VXA6179	TOP ANGLE ASS'Y	1	
50	VEE0C24	WIRE CABLE (14P)	1	P2705-P2502
51	VEE0C26	WIRE CABLE (8P)	1	P3701-P7651
52	VEE0C25	WIRE CABLE (4P)	1	P3781-P6601
53	VMC1374	REDUCTION SPRING	1	
54	VXU1478	DOOR BUTTON ASS'Y	1	
57	VSQ0687	FERRITE CORE	1	
58	VMT0442	SPONGE MAT	1	
59	VJR3	WIRE CLAMPER	2	
60	VEJ1857	ANT TERMINAL	1	
B1	XQN26+AG6FZ	SCREW	7	
B2	XTN26+6GFZ	SCREW	4	
B3	XTN26+8GR	SCREW	8	
B4	XTB3+16GFC	SCREW	4	
B5	XTV3+8GFZ	SCREW	1	
B6	XTW3+12TR	SCREW	4	
B7	XSN2+6FX	SCREW	1	
B9	XTV3+8G	SCREW	6	
B10	XTV3+10GR	SCREW	8	
B11	XTV3+6GFZ	SCREW	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks

❷ CHASSIS PARTS SECTION (1)

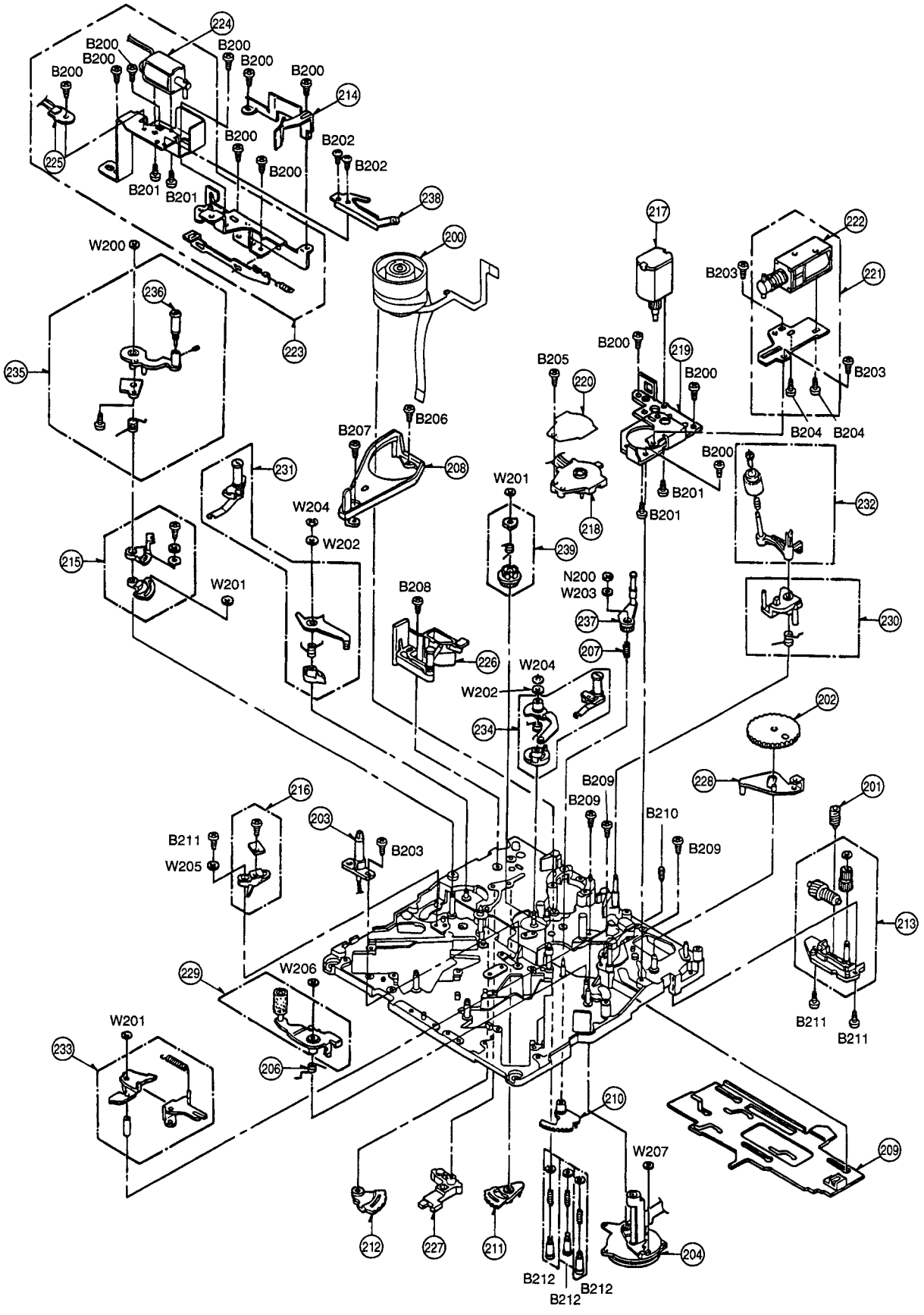


Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
100	VEM0638	S-REEL MOTOR (1) ASS'Y	1	
101	VEM0639	T-REEL MOTOR (1) ASS'Y	1	
102	VMS6462	OUTER SHAFT	2	
103	VMS5924	REEL INNER RAIL	2	
104	VXA6005	SLIDE ROD (1) ASS'Y	1	
105	VXA6006	REEL RELEASE ANGLE1 ASS'Y	1	
106	VXL2589	S BASE DRIVE ARM ASS'Y	1	
107	VXL2590	T BASE DRIVE ARM ASS'Y	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
B100	VHD0995	SCREW	8	
B101	XQN2+CF3	SCREW	2	
B102	XSB26+4FX	SCREW	3	
W100	VMX1079	CUT WASHER	2	
W101	VMX1394	CUT WASHER	2	

❸ CHASSIS PARTS SECTION (2)



Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
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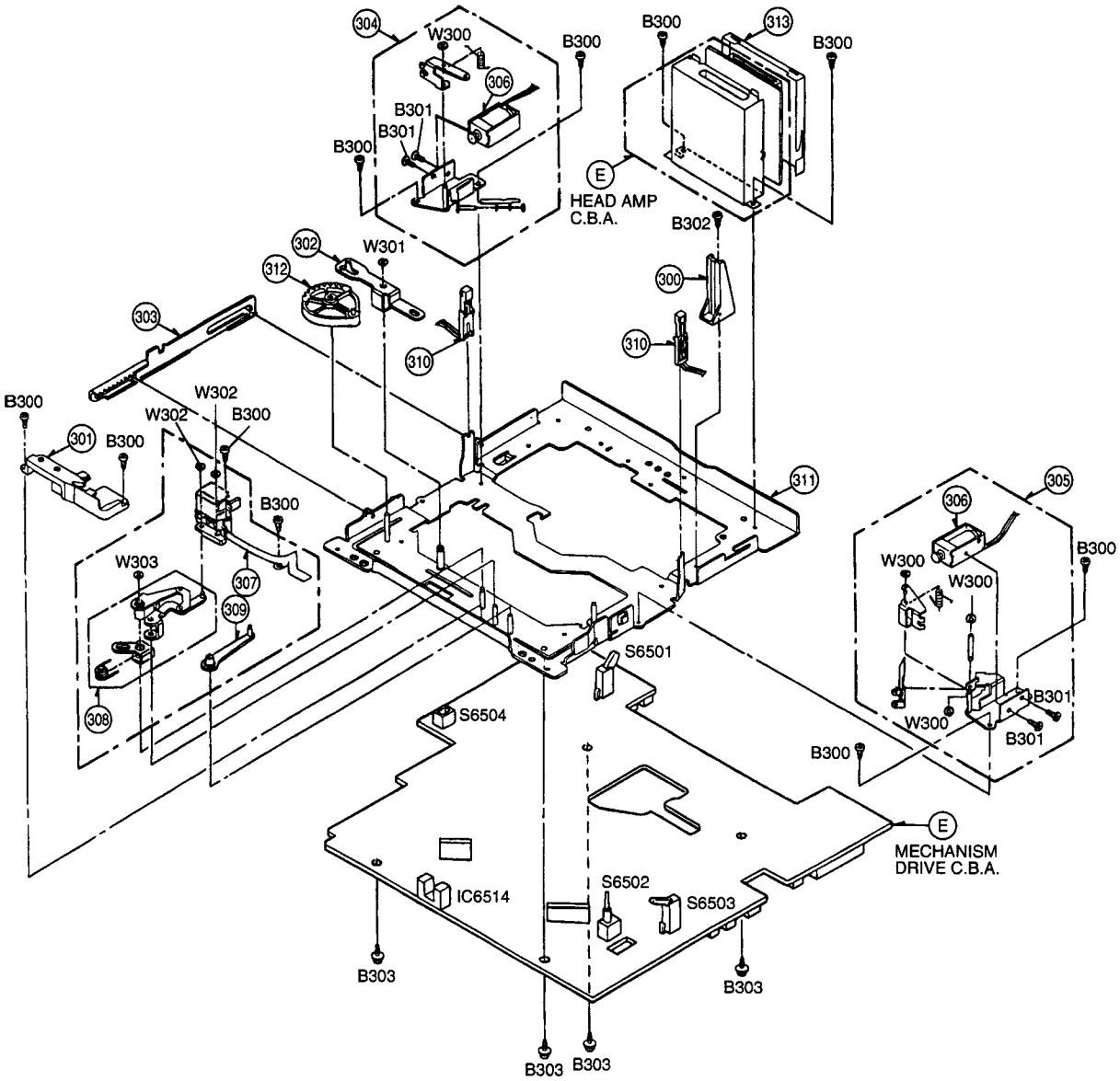
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
200	VEG1440	CYLINDER UNIT	1	
201	VDG1166	MOTOR WARM GEAR	1	
202	VDG1168	MAIN CAM GEAR	1	
203	VEK8323	LED HOLDER (1) ASS'Y	1	
204	VEM0640	CAPSTAN (1) ASS'Y	1	
206	VMB2933	PINCH RELEASE SPRING	1	
207	VMB2950	T4 THRUST SPRING	1	
208	VMD2533	LOADING RAIL	1	
209	VXA5563	MAIN ROD ASS'Y	1	
210	VXA5564	T4 SECTOR GEAR ASS'Y	1	
211	VXA5567	S SECTOR GEAR ASS'Y	1	
212	VXA5570	T SECTOR GEAR ASS'Y	1	
213	VXA5627	THRUST SHAFT HOLDER ASS'Y	1	
214	VMD3475	T1 GUIDE U.	1	
215	VXA5791	TENSION LEG SPRING HOOK	1	
216	VXA5820	TENSION SENSOR ASS'Y	1	
217	VEM0645	LOADING MOTOR (1)A ASS'Y	1	
218	VES0814	MODE SW ASS'Y	1	
219	VMA9799	MOTOR ANGLE	1	
220	VMZ2737	MODE SW COVER	1	
221	VXA6009	PINCH SOLENOID BASE (1)	1	
222	VSJ0217	PINCH SOLENOID	1	
223	VXA6010	CLEANER BASE (1) ASS'Y	1	
224	VSJ0222	CLEANING SOLENOID	1	
225	VEK7927	INSULLATION SENSOR	1	
226	VXA6052	S POST BASE A ASS'Y	1	
227	VXL2838	TEN REG. TURN ARM ASS'Y	1	
228	VXL2889	MAIN CAM ARM ASS'Y	1	
229	VXL2835	PINCH ARM (1) ASS'Y	1	
230	VXL2870	T2 ARM ASS'Y	1	
231	VXL2709	S1 LOADING ARM ASS'Y	1	
232	VXL2924	CLEANING ARM A ASS'Y	1	
233	VXL2776	PINCH TURN ARM (1) ASS'Y	1	
234	VXL2898	T LOADING ARM ASS'Y	1	
235	VXL2831	TENSION ARM S (1) ASS'Y	1	
236	VXP1761	TENSION ROLLER	1	
237	VXL2806	T4 ARM (1) ASS'Y	1	
238	VMA9753	STOPPER	1	
239	VXP1683	T4 CONNECTION GEAR ASS'Y	1	
B200	XQN2+CF3	SCREW	11	
B201	XQN2+A2	SCREW	4	
B202	XQN14+CF3	SCREW	2	
B203	XQN2+AM2	SCREW	3	
B204	VHD1101	SCREW	2	
B205	XQN2+CF6	SCREW	1	
B206	XQN2+AM4	SCREW	1	
B207	XQN2+A3	SCREW	1	
B208	XQN2+CF5	SCREW	1	
B209	XQN2+A35FZ	SCREW	3	
B210	VHD0356	SCREW	1	
B211	XQN2+CF4	SCREW	3	
B212	VXQ0439	SCREW	3	
W200	VMX0967	CUT WASHER	1	
W201	VMX1081	WASHER	3	
W202	XWGV15Z32G	WASHER	2	
W203	XWE16VW	WASHER	1	
W204	XUC12FP	E-RING	2	
W205	XWE2	WASHER	1	
W206	VMX1079	CUT WASHER	1	
W207	XWA2B	WASHER	1	
N200	VHN0312	NUT	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

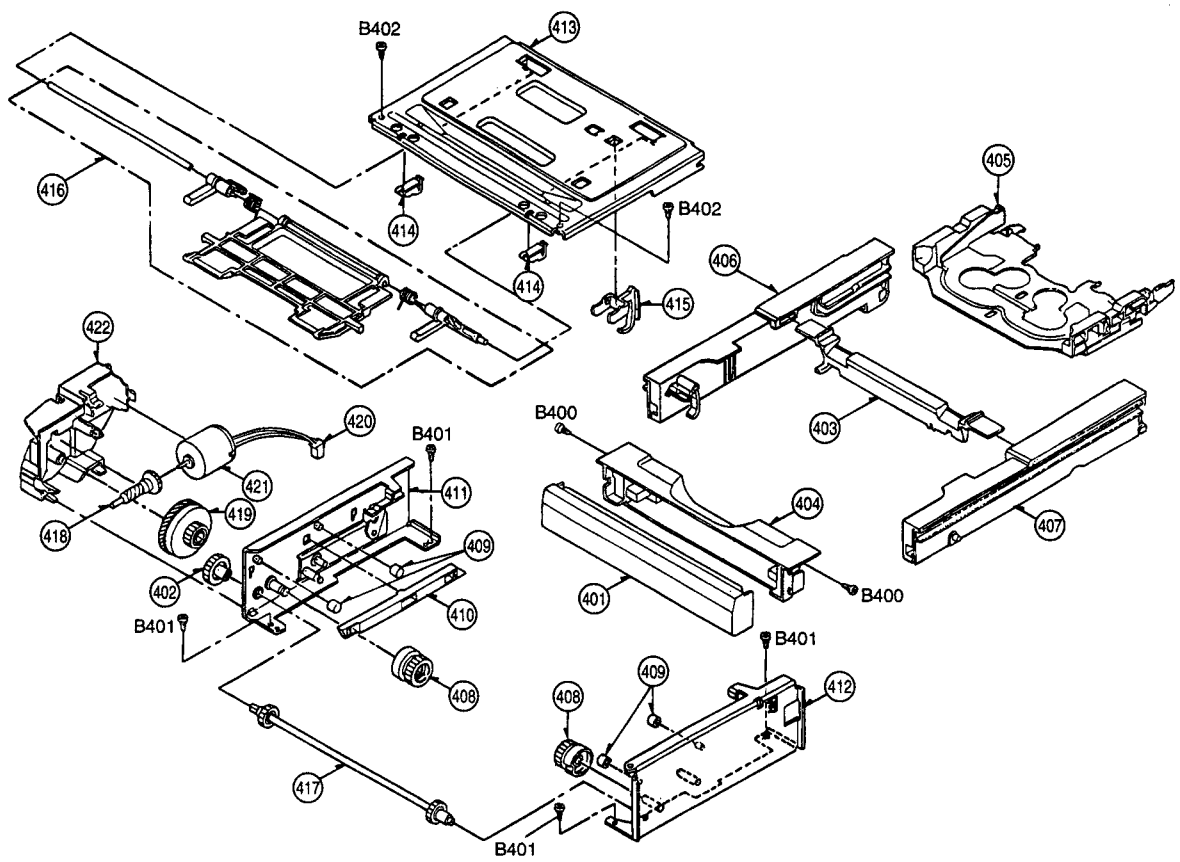
❹ SUB CHASSIS PARTS SECTION



Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
300	VMD3019	TRAY STOPPER A	1	
301	VMD2853	MIC STOPPER	1	
302	VML3292	COMMUNICATION ARM	1	
303	VML3293	TRAY CONNECTION ROD	1	
304	VXA5575	S-BRAKE SOLENOID BASE	1	
305	VXA5887	T-BRAKE SOLENOID BASE	1	
306	VSJ0216	BRAKE SOLENOID	2	
307	VXA6012	MIC CONNECTOR (1) ASS'Y	1	
308	VXL2777	MIC DRIVE ARM (1) ASS'Y	1	
309	VXL2780	MIC SUBLINK ARM (1) ASS'Y	1	
310	VEK8225	PHOTO SENSOR HOLDER (1)	2	
311	VXK1352	SUB CHASSIS (2) ASS'Y	1	
312	VXP1842	LOCK GEAR (1) ASS'Y	1	
313	VSC4699	SHIELD CASE B	1	
B300	XQN2+CF3	SCREW	10	
B301	XQN2+A1.5	SCREW	4	
B302	XQN2+CF4	SCREW	1	
B303	XYN26+J5	SCREW	4	
W300	VMX0967	CUT WASHER	4	
W301	VMX0653	CUT WASHER	1	
W302	VMX1548	CUT WASHER	2	
W303	VMX1079	CUT WASHER	1	

❺ CASSETTE TRAY PARTS SECTION



Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
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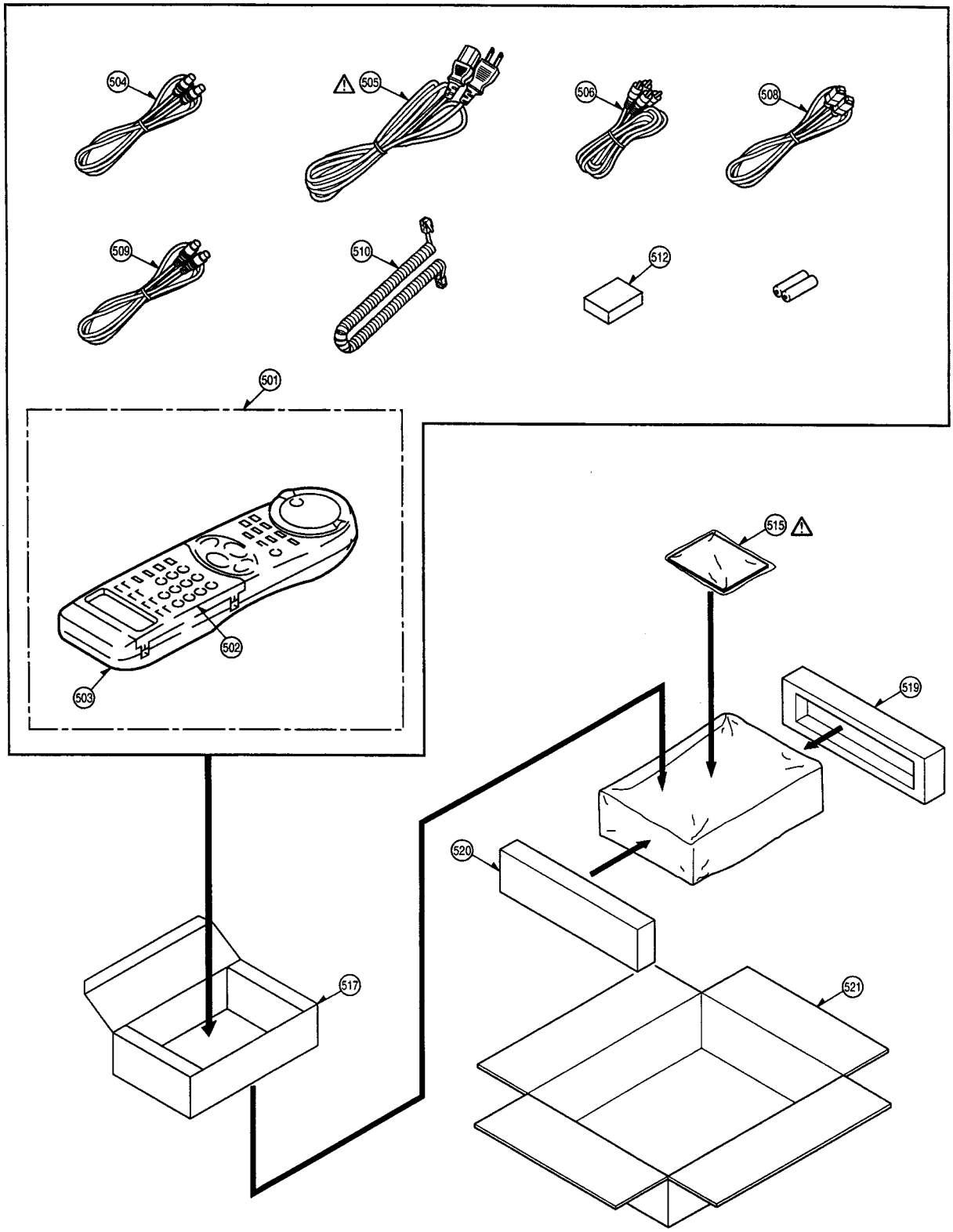
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
401	VGP4573	TRAY FRONT PANEL	1	
402	VDG1263	SYNCHRO. DRIVE GEAR	1	
403	VMD2845	REAR GUIDE	1	
404	VMD2846	FRONT GUIDE	1	
405	VXA5990	CASSETTE HOLDER ASS'Y	1	
406	VXA5991	S RACK ASS'Y	1	
407	VXA5992	T RACK ASS'Y	1	
408	VDG1260	PINION GEAR	2	
409	VDP1687	ROLLER	4	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
410	VMD2847	FRONT PROJECTION	1	
411	VXA6023	SIDE PLATE (S)	1	
412	VXA6024	SIDE PLATE (T)	1	
413	VMA9797	CASSETTE COVER	1	
414	VMD2849	TOP GUIDE	2	
415	VML3395	COVER OPEN LEVER	1	
416	VXA5999	BOOSTER (1) ASS'Y	1	
417	VXA6000	TRAY DRIVE SHAFT ASS'Y	1	
418	VDG1264	WORM GEAR	1	
419	VDG1265	WORM FOIL GEAR	1	
420	VEE0883	MOTOR WIRE CABLE	1	
421	VEM0844	TRAY MOTOR	1	
422	VMD2850	GEAR BOX	1	
B400	XTB26+8JFZ	SCREW	2	
B401	XSN2+3R	SCREW	4	
B402	XTB2+35FFY	SCREW	2	

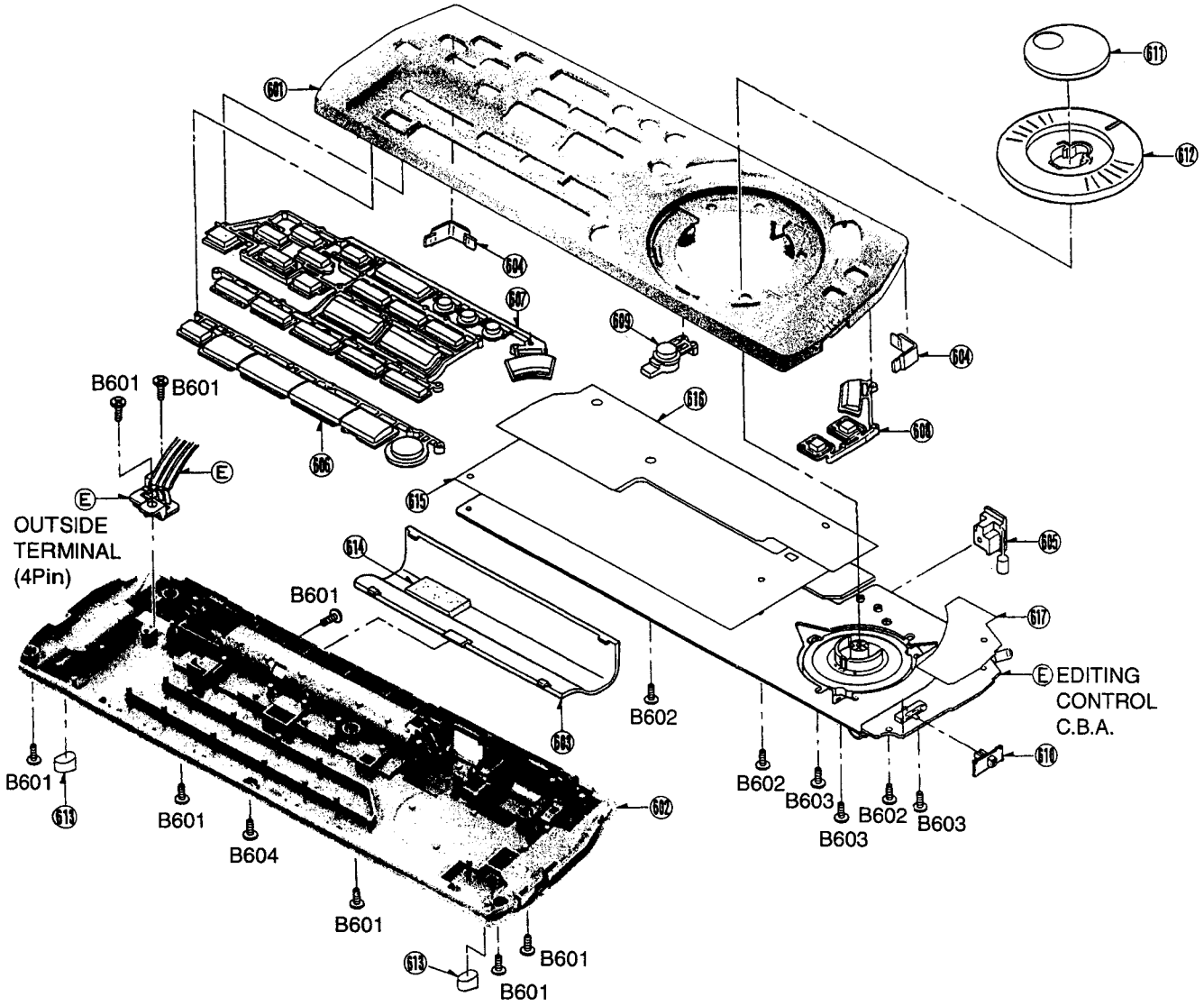
❻ PACKING PARTS SECTION



Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
501	EUR571603	REMOTE CONTROLLER	1	
504	VJA0658	S-VHS CABLE	1	
⚠ 505	VJA0488	POWER CODE	1	
506	VJA0788	AV OUTPUT CABLE	1	
508	VJA1011	DV CABLE	1	
509	VJA0787	EDIT 5P CABLE	1	
510	VJA1045	CONTROLLER CABLE	1	
512	VFK1451	VIDEO HEAD CLEANING TAPE	1	
⚠ 515	VQT7774	OPERATING INSTRUCTION	1	(ENGLISH)
⚠ 515	VQT7775	OPERATING INSTRUCTION	1	(FRENCH)
517	VPK2111	ACCESSORIES PACKING	1	
519	VPN4748	CUSHION (R)	1	
520	VPN4749	CUSHION (L)	1	
521	VPG9182	PACKING	1	

❼ EDITING CONTROLLER PARTS SECTION



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2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
601	UR57CS612D	UPPER CASE	1	
602	UR57CS613B	LOWER CASE	1	
603	UR57EC614B	BATTERY DOOR	1	
604	UR57EC615A	SMOKE PLATE	2	
605	UR57FT616B	CAP	1	
606	UR57BT617C	BUTTON A	1	
607	UR57BT618C	BUTTON B	1	
608	UR57BT619C	BUTTON C	1	
609	UR57BT620AA	BUTTON D	1	
610	UR57TM621B	SW KNOB	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
611	U19TM2069	KNOB A	1	
612	U19TM2070	KNOB B	1	
613	UR57GL625AA	FOOT	2	
614	UR57DP641	DUMPER	1	
615	UR57ST622A	STATIC PROOF SHEET	1	
616	UR57ST623B	STATIC PROOF SHEET	1	
617	UR57ST624A	STATIC PROOF SHEET	1	
B601	XTB2+6GFZ	SCREW	8	
B602	XTB2+5GFZ	SCREW	3	
B603	XTB26+5GFZ	SCREW	3	
B604	XTB2+4GFZ	SCREW	1	

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2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1,000 OHMS. All capacitors are in MICROFARADS (uf), P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
After the discontinuation of this assembly in production, it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP06C02C	MAIN C. B. A.	1	(RTL)
				THE FOLLOWING C. B. A. S
				ARE INCLUDED IN
				MAIN C. B. A.
				VEP03D99A
				VEP03E28A
				VEP03E29A
				VEP03D98B
				VEP04669B
				VEP06C89A
				VEP07973B
				VEP07801AR
■	VEP03D99A	ANALOG C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP03E28A	INPUT/OUTPUT C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
				INCLUDING THE
				REAR JACK C. B. A.
				(VEP03E29A)
■	VEP03E29A	REAR JACK C. B. A.	1	(RTL)
				INCLUDED IN
				INPUT/OUTPUT C. B. A.
				(VEP03E28A)
■	VEP03D98B	DIGITAL C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP04669B	AUDIO C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP06C89A	MOTOR DRIVE C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP07973B	NICAM DECODER PACK C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP07801AR	TV DEMODULATOR PACK C. B. A.	1	(RTL)
				INCLUDED IN
				MAIN C. B. A. (VEP06C02C)
■	VEP05351A	HEAD AMP C. B. A.	1	(RTL)
■	VEP02557A	MECHANISM DRIVE C. B. A.	1	(RTL)
■	VEP07A05A	TIMER C. B. A.	1	(RTL)
■	VEP03E91A	FRONT (L) C. B. A.	1	(RTL)
■	VEP04728A	FRONT (R) C. B. A.	1	(RTL)
■	VEP07966A	MODULAR C. B. A.	1	(RTL)
■	VEP07965A	FRONT LED C. B. A.	1	(RTL)
■	VEP07968A	IR C. B. A.	1	(RTL)
■	VEP03E18A	5P JACK C. B. A.	1	(RTL)
■	VEP07967A	DV JACK C. B. A.	1	(RTL)
■	VEP01839A	POWER C. B. A.	1	(RTL)
■	UR57VPB623	EDITING CONTROL C. B. A.	1	(RTL)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP06C02C	MAIN C. B. A.	1	(RTL)
C2001	ECST0JX226Z	T. CAPACITOR CH6. 3V 22U	1	
C2002-04	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	3	
C2005, 06	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	2	
C2007-09	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	3	
C2010	ECST0JD107Z	T. CAPACITOR CH6. 3V 100U	1	
C2011-13	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	3	
C2014, 15	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	2	
C2016	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C2018	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C2019	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C2020	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C2021	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C2022	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C2023	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C2024	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C2025	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C2026	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C2027-30	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	4	
C2042-45	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	4	
C2501	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C2502, 03	ECEA1CKA101	E. CAPACITOR 16V 100U	2	
C2505, 06	ECEA1CKA101	E. CAPACITOR 16V 100U	2	
C2507, 08	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	2	
C2509	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2510	ECUX1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C2511	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2512, 13	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	2	
C2514	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C2515	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C2519, 20	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	2	
C2521	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2522	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C2523, 24	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C2525	ECUX1H682KBN	C. CAPACITOR CH 50V 6800P	1	
C2526	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C2527	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C2528, 29	ECUX1H682KBN	C. CAPACITOR CH 50V 6800P	2	
C3001	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3002	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3003	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C3004, 05	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	2	
C3006	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3007	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3008	ECUX0J225KBN	C. CAPACITOR CH6. 3V 2. 2U	1	
C3010-12	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	3	
C3013	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3014	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C3015	ECST1CY335Z	T. CAPACITOR CH 16V 3. 3U	1	
C3016	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3017	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C3018	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3019	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C3020	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3021	ECST1CY684Z	T. CAPACITOR CH 16V 0. 68U	1	
C3023	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1	
C3024	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C3025	ECUX1H270JCV	C. CAPACITOR CH 50V 27P	1	
C3026	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3027	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C3028-30	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	3	
C3031	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3032	ECST0JY106Z	T. CAPACITOR CH6. 3V 10U	1	
C3033	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3034	ECUX1C273KBV	C. CAPACITOR CH 16V 0. 027U	1	
C3035	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3036	ECUX1H100DCV	C. CAPACITOR CH 50V 10P	1	
C3037	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3038, 39	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2	
C3040, 41	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	2	
C3042	ECUX1H103ZFV	C. CAPACITOR CH 50V 0. 01U	1	
C3043-54	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	12	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3055-59	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	5	
C3062-65	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C3066	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3067	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C3068-72	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	5	
C3073-77	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	5	
C3078,79	ECUX1H070CCV	C. CAPACITOR CH 50V 7P	2	
C3080	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3081	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3082	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3083	ECUX1C474KBN	C. CAPACITOR CH 16V 0.47U	1	
C3084	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1	
C3085	ECUX1H473ZFV	C. CAPACITOR CH 50V 0.047U	1	
C3086,87	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C3090,91	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C3092	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3093-96	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	4	
C3097,98	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3099,00	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C3101,02	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3103	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3106,07	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3108	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1	
C3111	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3116	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3117	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3151	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3152,53	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	2	
C3154	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3155,56	ECUX1H180JCV	C. CAPACITOR CH 50V 18P	2	
C3157	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C3158	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3201,02	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C3203,04	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3205	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3206	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3207	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3208	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3209-11	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3212,13	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	2	
C3214	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3215	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3216-18	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3219	ECUX1C273KBV	C. CAPACITOR CH 16V 0.027U	1	
C3220-22	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3223	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C3224	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3225-27	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3228	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C3229	ECUX1H331JCV	C. CAPACITOR CH 50V 330P	1	
C3230	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3231	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C3232	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3233,34	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3235	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1	
C3236-38	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3239	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3240	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3241,42	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3243	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3244	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3245	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3246	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	1	
C3247	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C3248,49	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3250	ECUX0J225KBN	C. CAPACITOR CH6.3V 2.2U	1	
C3251-53	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	3	
C3254	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3255,56	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C3257	ECSTOJX476Z	T. CAPACITOR CH6.3V 47U	1	
C3258	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3259	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3260	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3261	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3262	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3264	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C3265	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3267	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3280	ECST0JD107Z	T. CAPACITOR CH6.3V 100U	1	
C3301	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	1	
C3302	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3303	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3304	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3305	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3306	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3307	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3308-10	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	3	
C3311	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3312	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3313-16	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	4	
C3317	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3318	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3319	ECUX1H470JCQ	C. CAPACITOR CH 50V 47P	1	
C3320	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3321	ECUX1H470JCQ	C. CAPACITOR CH 50V 47P	1	
C3322-24	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	3	
C3325	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3326	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3327	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3328	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3329,30	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	2	
C3331	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3332,33	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	2	
C3334	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3335	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3336	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3337	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3338	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3339	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	1	
C3340	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3341,42	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	2	
C3343	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3344	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3345	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3346	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3347	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3348	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3349	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3350	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3351	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3352	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3353	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3354-56	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	3	
C3357-59	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	3	
C3360,61	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	2	
C3362	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3363	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3364	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C3365	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	1	
C3366	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	1	
C3367	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3368-70	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	3	
C3371,72	ECUX1H101JCQ	C. CAPACITOR CH 50V 100P	2	
C3373	ECUX1E102KBQ	C. CAPACITOR CH 25V 1000P	1	
C3374-78	ECUX1C104ZFQ	C. CAPACITOR CH 16V 0.1U	5	
C3379	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3401	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3402,03	EEVHB1C100	E. CAPACITOR 16V 10U	2	
C3406	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3408	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C3412	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3413,14	EEVHB1C100	E. CAPACITOR 16V 10U	2	
C3415	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3416	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3417	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3438	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3439	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C3501	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3502	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3503,04	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3505-07	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3	
C3511	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3512	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3513	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C3514	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3515	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3516	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C3517	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3518	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3519	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3520	EEVHB0J470	E. CAPACITOR 6.3V 47U	1	
C3521	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3522	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
C3523	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
C3524	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3525	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C3526	ECUN1H331JCN	C. CAPACITOR CH 50V 330P	1	
C3527	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	1	
C3528	ECUM1E153KBN	C. CAPACITOR CH 25V 0.015U	1	
C3529, 30	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	2	
C3531	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3535	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3601	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3602	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C3603	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3604	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3606	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C3608	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C3610	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3617	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3618	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3621, 22	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C3623	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C3624	ECA0JM221	E. CAPACITOR 6.3V 220U	1	
C3625	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3626	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3627	ECA0JM331	E. CAPACITOR 6.3V 330U	1	
C3628	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3629	ECA0JM331	E. CAPACITOR 6.3V 330U	1	
C3630	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3631	VCEA1CBS100	E. CAPACITOR 16V 10U	1	
C3632	VCEA0JBS470	E. CAPACITOR 6.3V 47U	1	
C3633	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3634	VCEA0JBS470	E. CAPACITOR 6.3V 47U	1	
C3635, 36	VCEA0JBS101	E. CAPACITOR 6.3V 100U	2	
C3637	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3638	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C3639	VCEA1ABS470	E. CAPACITOR 10V 47U	1	
C3640	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C3641, 42	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	2	
C3643, 44	VCEA0JBS470	E. CAPACITOR 6.3V 47U	2	
C3645	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3647	VCEA0JBS470	E. CAPACITOR 6.3V 47U	1	
C3648	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C3650	ECQV1H104JM	P. CAPACITOR 50V 0.1U	1	
C3651	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3652	ECEA1AKA470	E. CAPACITOR 10V 47U	1	
C3653	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C3654	ECUM1H152KBN	C. CAPACITOR CH 50V 1500P	1	
C3655	ECQP1392JZ	P. CAPACITOR 3900P	1	
C3656	ECQB1H152JF	P. CAPACITOR 50V 1500P	1	
C3657	ECEA1HKGR68	E. CAPACITOR 50V 0.68U	1	
C3658	ECEA0JKA330	E. CAPACITOR 6.3V 33U	1	
C3659	ECUX1H561JCN	C. CAPACITOR CH 50V 560P	1	
C3660	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C3661	ECEA50MR33	E. CAPACITOR 0.33U	1	
C3662	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3663	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C3664	ECQV1H683JM	P. CAPACITOR 50V 0.068U	1	
C3701, 02	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C3703	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3704-06	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3	
C3707	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C3708, 09	ECUX1H060DCV	C. CAPACITOR CH 50V 6P	2	
C3710-12	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3713	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3714	ECUX1H271JCV	C. CAPACITOR CH 50V 270P	1	
C3715-18	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C3719-21	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	3	
C3722-25	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C3727	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C3802	ECUX1H561JCN	C. CAPACITOR CH 50V 560P	1	
C3803	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C3804	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3806	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	1	
C3807	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3808	ECUX1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C3809	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
C3810	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3811	ECUM1H090DCN	C. CAPACITOR CH 50V 9P	1	
C3812	ECUX1H561JCN	C. CAPACITOR CH 50V 560P	1	
C3814	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C3815	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3816	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C3818	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C3819	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3820	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3822	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C3823	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C3901	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3902	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3903	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3905-07	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	3	
C3908	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3911-14	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	4	
C3915	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3918	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3920	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3921	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C4003, 04	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4006	ECEA1CU101	E. CAPACITOR 16V 100U	1	
C4007	VCEA1CAS220	E. CAPACITOR 16V 22U	1	
C4008	ECUX1H223KBN	C. CAPACITOR CH 50V 0.22U	1	
C4009	VCEA1CAS220	E. CAPACITOR 16V 22U	1	
C4010, 11	VCEA1CAS102	E. CAPACITOR 16V 1000U	2	
C4012	VCEA1CAS220	E. CAPACITOR 16V 22U	1	
C4013, 14	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4015	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4016, 17	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4018, 19	ECHR1H223JZ	P. CAPACITOR 50V 0.022U	2	
C4020-23	VCEA1CAE100	E. CAPACITOR 16V 10U	4	
C4203	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4206	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4207	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C4211	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4212	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C4213	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4214	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4215	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C4217	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C4218	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4219	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	1	
C4220, 21	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C4222, 23	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	2	
C4224, 25	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	2	
C4302	VCEA1AAE101	E. CAPACITOR 10V 100U	1	
C4303	ECHR1H103JZ	P. CAPACITOR 50V 0.01U	1	
C4304	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4305	VCEA0JAE221	E. CAPACITOR 6.3V 220U	1	
C4306	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4307	VCEA0JAE221	E. CAPACITOR 6.3V 220U	1	
C4308	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4309	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4310	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4311	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4312	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4313	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4314	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4315	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4316	VCEA1CAE100	E. CAPACITOR 16V 10U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4317	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4318	ECUM1E683KBN	C. CAPACITOR CH 25V 0.063U	1	
C4319	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4320	VCEA0JAE470	E. CAPACITOR 6.3V 47U	1	
C4321	ECHR1H103JZ	P. CAPACITOR 50V 0.01U	1	
C4322	ECUM1E683KBN	C. CAPACITOR CH 25V 0.063U	1	
C4323	VCEA1CAE100	E. CAPACITOR 16V 10U	1	
C4324	ECUM1E683KBN	C. CAPACITOR CH 25V 0.063U	1	
C4325,26	VCEA1HAE2R2	E. CAPACITOR 50V 2.2U	2	
C4327	VCEA0JAE470	E. CAPACITOR 6.3V 47U	1	
C4328	ECHR1H103JZ	P. CAPACITOR 50V 0.01U	1	
C4329,30	VCEA1HAE2R2	E. CAPACITOR 50V 2.2U	2	
C4331	ECUM1E683KBN	C. CAPACITOR CH 25V 0.063U	1	
C4332,33	VCEA1CAE100	E. CAPACITOR 16V 10U	2	
C4334	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4335,36	VCEA1HAE2R2	E. CAPACITOR 50V 2.2U	2	
C4337	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4338	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C4339	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4340,41	VCEA1HAE2R2	E. CAPACITOR 50V 2.2U	2	
C4342-44	VCEA1CAE100	E. CAPACITOR 16V 10U	3	
C4345,46	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4347,48	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C4349	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4350	VCEA1CAE100	E. CAPACITOR 16V 10U	1	
C4351	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4352	ECEA1CKA101	E. CAPACITOR 16V 100U	1	
C4353	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4354	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4355	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4356	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4357	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4358	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4359	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4360	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4361,62	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C4363	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4364	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4365,66	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C4367	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4368	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4371	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C4372	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4373,74	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	2	
C4377	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4378	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4379-81	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	3	
C4382	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C4384,85	ECUX1C393KBV	C. CAPACITOR CH 16V 0.039U	2	
C4501,02	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C4503-05	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	3	
C4506	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4515	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C4703	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4704	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4705,06	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C4707	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4708	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4709	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6001	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C6002	ECST0JD107Z	T. CAPACITOR CH6.3V 100U	1	
C6003	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6004	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C6005	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6006,07	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2	
C6008	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6009,10	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C6011,12	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	2	
C6015	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C6017,18	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C6019	ECST0JD107Z	T. CAPACITOR CH6.3V 100U	1	
C6020	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6021	ECUX1H120JCV	C. CAPACITOR CH 50V 12P	1	
C6022-25	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C6026	ECST0JD107Z	T. CAPACITOR CH6.3V 100U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6027	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6028-30	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	3	
C6033,34	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	2	
C6035	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6036	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C6041	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C6043	ECUX1H101JCV	C. CAPACITOR CH 50V 100P	1	
C6044	ECST0JX226Z	T. CAPACITOR CH6.3V 22U	1	
C6045-47	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3	
C6201,02	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C6203	ECEA0JKA330	E. CAPACITOR 6.3V 33U	1	
C6204	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6205	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C6206	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C6207	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6208	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6401,02	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C6701	VCEA1CBS100	E. CAPACITOR 16V 10U	1	
C6702,03	VCEA1CBS470	E. CAPACITOR 16V 47U	2	
C6704	VCEA1CBS100	E. CAPACITOR 16V 10U	1	
C6705	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C6706	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C6707	VCEA1CBS470	E. CAPACITOR 16V 47U	1	
C6708	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6709	VCEA0JBS470	E. CAPACITOR 6.3V 47U	1	
C6710	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C6711,12	VCEA1CBS100	E. CAPACITOR 16V 10U	2	
C6713	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C6714	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6715	VCEA0JBS101	E. CAPACITOR 6.3V 100U	1	
C6716	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6717	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6718-20	ECA1CM332	E. CAPACITOR 16V 3300U	3	
C6721,22	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C6724	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6725	ECEA1AKA221Q	E. CAPACITOR 10V 220U	1	
C6726	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C6727	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C6728	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C6729	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C6730	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6731	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6732-35	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	4	
C6736,37	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C7901	ECA1CM471	E. CAPACITOR 16V 470U	1	
C7902	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C7905	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C7913	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C7914	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C7916	ECUX1H681JCN	C. CAPACITOR CH 50V 680P	1	
C7917	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C7921	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C7922	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30001	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C30002	EEVHB0J220	E. CAPACITOR 6.3V 22U	1	
C30003	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30004	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30005	ECUX1H050DCN	C. CAPACITOR CH 50V 5P	1	
C30006	ECUM1H090CCN	C. CAPACITOR 50V 9P	1	
C30007	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C30008	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C30009-14	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	6	
C30015,16	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C30017	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C30018	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	1	
C30019	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30020	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30021	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C30022	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C30023	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C30024,25	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C30026	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30027	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
C30028	ECUX1C474ZFN	C. CAPACITOR CH 16V 0.47U	1	
C30029,30	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C30031	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C30032, 33	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	2	
C30034	EEVHB0J220	E. CAPACITOR 6.3V 22U	1	
C30035	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30036	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30037	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
C30038	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C30039	ECUM1C334ZFN	C. CAPACITOR CH 50V 0.33U	1	
C30040	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C30041	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	1	
C30042	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C30043	ECUM1C334ZFN	C. CAPACITOR CH 16V 0.33U	1	
C30044	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30045	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C30046	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30047	EEVHP1A100	E. CAPACITOR 10V 10U	1	
C30048	EEVHB0J220	E. CAPACITOR 6.3V 22U	1	
C30049	ECUM1C335ZFM	C. CAPACITOR CH 16V 3.3U	1	
C30050	EEVHB0J101	E. CAPACITOR 6.3V 100U	1	
C30051	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30052	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C30053	ECUN1H331JCN	C. CAPACITOR CH 50V 330P	1	
C30054	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C30055	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C30057	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C30058	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30059	EEVHB1H1R0	E. CAPACITOR 50V 1U	1	
C30060	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C30061	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30062-65	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	4	
C30066-72	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	7	
C30073	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C30074	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30075	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C30076	ECEV1CA100	E. CAPACITOR CH 16V 10U	1	
C30077, 78	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C30079	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C30080	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30081	EEVHB0J220	E. CAPACITOR 6.3V 22U	1	
C30082	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30083	EEVHB0J220	E. CAPACITOR 6.3V 22U	1	
C30084	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30086	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30087	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30088	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C30089	ECUX1H102JCN	C. CAPACITOR CH 50V 1000P	1	
C30090	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C30091	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1	
C30092	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
D601	MA728	DIODE	1	
D2001	1SS355	DIODE	1	
D2003-05	1SS355	DIODE	3	
D2006-14	MA728	DIODE	9	
D2501	AK04	DIODE	1	
D2503	AK04	DIODE	1	
D2505	AK04	DIODE	1	
D2507	AK04	DIODE	1	
D3002	MA728	DIODE	1	
D3003	MA151K	DIODE	1	
D3201	MA142WA	DIODE	1	
D3203	MA728	DIODE	1	
D3502, 03	MA151K	DIODE	2	
D3504	1SV101	DIODE	1	
D3602	MA4033-H	DIODE	1	
D3603	MA165	DIODE	1	
D3604	MA4033-H	DIODE	1	
D3605	MA165	DIODE	1	
D3606	MA720	DIODE	1	
D3607	MA151WK	DIODE	1	
D3608, 09	MA165	DIODE	2	
D3610	MA151WK	DIODE	1	
D3611	MA4056	DIODE	1	
D3612, 13	MA165	DIODE	2	
D3614	RB441PT-77	DIODE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D3801	MA28W	DIODE	1	
D3901	MA151WK	DIODE	1	
D3902	MA4062L	DIODE	1	
D4001	MA151WA	DIODE	1	
D4002, 03	MA165	DIODE	2	
D4004	MA151WK	DIODE	1	
D4301	MA151K	DIODE	1	
D4302	MA153	DIODE	1	
D4501	MA721	DIODE	1	
D6001-05	1SS355	DIODE	5	
D6007, 08	1SS355	DIODE	2	
D6201	MA723	DIODE	1	
D6202	MA720	DIODE	1	
D6203-05	MA723	DIODE	3	
D6401	MA720	DIODE	1	
D6701	MA165	DIODE	1	
D6719	MA720	DIODE	1	
D6720	MA165	DIODE	1	
D6721	21DQ04	DIODE	1	
D6722	MA4062L	DIODE	1	
D6724	MA165	DIODE	1	
D6739	MA723	DIODE	1	
D7902	MA4056-H	DIODE	1	
D7905	RB441PT-77	DIODE	1	
D7909	MA4130L	DIODE	1	
D30001	MA151K	DIODE	1	
D30002	1SV228	DIODE	1	
FL3401	VLF1367	FILTER	1	
FP3201	VJS3251	CONNECTOR (FEMALE)	1	
IC2001	M31020VLEG	IC	1	
IC2002	M62370GP	IC	1	
IC2003	PST7029	IC	1	
IC2004	S29L331AFS	IC	1	
IC2005	D784037GK509	IC	1	
IC2006	MM1320ENRE	IC	1	
IC2502	TL1453CNS	IC	1	
IC3001	T9P90EF	IC	1	
IC3002	UPD489001GC	IC	1	
IC3003	MN67373	IC	1	
IC3004	M52387FP	IC	1	
IC3005	BH7086KV	IC	1	
IC3006	M52684AFP	IC	1	
IC3007	TC7SH00FU	IC	1	
IC3009	TC7SH08FU	IC	1	
IC3151-54	TC7SHU04FU	IC	4	
IC3201	M65500FP	IC	1	
IC3202	UPD42S4260B8	IC	1	
IC3203	AN3741FAP	IC	1	
IC3204	AD9057BRS	IC	1	
IC3205	TC7SH08FU	IC	1	
IC3401	NJU4053BV	IC	1	
IC3404	NJM2255D	IC	1	
IC3405	NJU4053BV	IC	1	
IC3502	BU6254F	IC	1	
IC3603	AN3581S	IC	1	
IC3604, 05	TL431CLP	IC	2	
IC3606	RN5RG22AA	IC	1	
IC3610	AN3296S	IC	1	
IC3701	TSB13LV11PBW	IC	1	
IC3801	MB90089WVAS	IC	1	
IC3802	MM1108XFF	IC	1	
IC3901, 02	BU4052BCF	IC	2	
IC4002, 03	BU4052BCF	IC	2	
IC4201	NJM2112V	IC	1	
IC4210	NJM2115V	IC	1	
IC4301	NJM79L05A	IC	1	
IC4302	NJM4558M	IC	1	
IC4303	UPC78L05J	IC	1	
IC4304, 05	NJM4558M	IC	2	
IC4306	M62409FP	IC	1	
IC4307	NJM4558M	IC	1	
IC4308	M62409FP	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC4309	BU4052BCF	IC	1	
IC4310, 11	NJM4558M	IC	2	
IC4312	NJM4565DD	IC	1	
IC4313, 14	BU4052BCF	IC	2	
IC4315	NJM4558M	IC	1	
IC4316	HA17431PA	IC	1	
IC4501	AK4520A-VF	IC	1	
IC4702	D78011FGC564	IC	1	
IC4703	PST591D	IC	1	
IC6001	M31020VLEF	IC	1	
IC6002	PST7029	IC	1	
IC6003	MC14013BF	IC	1	
IC6004	TC7W74FU	IC	1	
IC6005	TC7S86FU	IC	1	
IC6006	TC75W54FU	IC	1	
IC6201	S80743AL	IC	1	
IC6202	BU4052BCF	IC	1	
IC6203	M6M80041P	IC	1	
IC6205	M38027V4EH	IC	1	
IC6401	M66010GP	IC	1	
IC6403	M66010GP	IC	1	
IC6701	NJM79L08UA	IC	1	
IC6702	NJM78L08UA	IC	1	
IC6703	NJM2904M	IC	1	
IC6704, 05	TL431CLP	IC	2	
IC6707	RN5RG30AA	IC	1	
IC6708	TCHC4538AF	IC	1	
IC6709-11	TC7W74F	IC	3	
IC6712	TC7W08F	IC	1	
IC6713	TC7SH32F	IC	1	
IC6714	TC7S08F	IC	1	
IC7901	M66006FP	IC	1	
IC30001	TA1221AF	IC	1	
IC30002	TC90A23F	IC	1	
IC30003	TA8761P	IC	1	
IC30004	TC52V4300SF	IC	1	
IC30005	NJM2904M	IC	1	
IC30006	MC74HCU04AF	IC	1	
IC30007, 08	TCHC4538AF	IC	2	
IC30009	PST9129	IC	1	
⚠ IP3601	VSF0015A04	IC PROTECTOR	1	
⚠ IP3602, 03	VSF0015A06	IC PROTECTOR	2	
⚠ IP3604	VSF0015A025	IC PROTECTOR	1	
⚠ IP6701	VSF0015A025	IC PROTECTOR	1	
⚠ IP7901	VSF0015A04	IC PROTECTOR	1	
JK602	VJJ0242	REMOTE CONTROL JACK	1	
JK603	VJJ0577	JACK	1	
JK3900	VEJ1856	I/O JACK	1	
K2503, 04	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
L2001	ELJPA100KF	COIL 10UH	1	
L2003	ELJPA100KF	COIL 10UH	1	
L2501-04	VLQ0614K331	COIL 330UH	4	
L3001-04	ELJPA100KF	COIL 10UH	4	
L3006-08	ELJPA100KF	COIL 10UH	3	
L3009	VLQ0426J120	COIL 12UH	1	
L3011	ELJPA100KF	COIL 10UH	1	
L3151, 52	ELJPA220KB	COIL 22UH	2	
L3201-07	ELJPA100KF	COIL 10UH	7	
L3208	ELJPA220KB	COIL 22UH	1	
L3209	ELJPA100KF	COIL 10UH	1	
L3401	VLQ0319K330	COIL 33UH	1	
L3501	VLQ0319K330	COIL 33UH	1	
L3503	VLQ0211J220	COIL 22UH	1	
L3504	VLQ0319K100	COIL 10UH	1	
L3505	VLQ0319K680	COIL 68UH	1	
L3604, 05	VLQ0599J680	COIL 68UH	2	
L3606	VLQ0599J330	COIL 33UH	1	
L3701-03	ELJPA100KF	COIL 10UH	3	
L3801, 02	VLQ0319K330	COIL 33UH	2	
L3803	VLQ0163J220	COIL 22UH	1	
L3804, 05	VLQ0319K330	COIL 33UH	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
L3901	VLQ0599J680	COIL 68UH	1	
L4001	ELESE6R8KA	COIL 6.8UH	1	
L4201	VLQ0426J6R8	COIL 6.8UH	1	
L4501, 02	ELJPA100KF	COIL 10UH	2	
L4702, 03	VLQ0599J100	COIL 10UH	2	
L6702	ELESE331KA	COIL 330UH	1	
L6704	VLQ0599J680	COIL 68UH	1	
L6706	VLQ0599J680	COIL 68UH	1	
L30001	VLQ0163J100	COIL 10UH	1	
L30002-04	VLQ0319K100	COIL 10UH	3	
L30005	VLQ0319K680	COIL 68UH	1	
LB601, 02	VLP0145	CHIP INDUCTOR	2	
LB2001, 02	VLP0145	CHIP INDUCTOR	2	
LB2004-06	VLP0145	CHIP INDUCTOR	3	
LB2007	VLF1148A241	CHIP INDUCTOR	1	
LB2501, 02	VLP0083	FILTER	2	
LB3001, 02	VLP0364	CHIP INDUCTOR	2	
LB3003	VLP0145	CHIP INDUCTOR	1	
LB3006	VLP0145	CHIP INDUCTOR	1	
LB3011	VLP0145	CHIP INDUCTOR	1	
LB3401, 02	VLP0323A601	CHIP INDUCTOR	2	
LB3501-03	VLP0196	CHIP INDUCTOR	3	
LB3505-07	VLP0323A601	CHIP INDUCTOR	3	
LB3509, 10	VLP0196	CHIP INDUCTOR	2	
LB3511-13	VLP0323A601	CHIP INDUCTOR	3	
LB3701	VLP0145	CHIP INDUCTOR	1	
LB6001	VLP0145	CHIP INDUCTOR	1	
LB6003, 04	VLP0145	CHIP INDUCTOR	2	
LB6201, 02	VLP0083	FILTER	2	
LB6701-06	VLP0083	FILTER	6	
P1102	VJS1239T	CONNECTOR (FEMALE)	1	
P2502	VJP1831T	CONNECTOR (MALE)	1	
P3701	VJP1229T	CONNECTOR (MALE)	1	
P3701	VJP3125B006	CONNECTOR (MALE) 6P	1	
P4001	VJS3537A018G	CONNECTOR (FEMALE)	1	
P6201	VJP1231T	CONNECTOR (MALE) 4P	1	
P6401	VJS3537A022G	CONNECTOR (FEMALE)	1	
P6701	VJS3537A032G	CONNECTOR (FEMALE)	1	
P6703	VJS3537A026G	CONNECTOR (FEMALE)	1	
P6707	VJP1393T	CONNECTOR (MALE) 13P	1	
P6707	VJS1239T	CONNECTOR (FEMALE)	1	
P7901	VJS3537A019G	CONNECTOR (FEMALE)	1	
P7902	VJS3537A017G	CONNECTOR (FEMALE)	1	
PP3601-03	VJP3043G015W	CONNECTOR (MALE)	3	
PP3604	VJP3042G014W	CONNECTOR (MALE)	1	
PP3605	VJP3042G016W	CONNECTOR (MALE)	1	
PP3606	VJP3042G009W	CONNECTOR (MALE)	1	
PP3610	VJP3994	CONNECTOR (MALE)	1	
PP3701	VJP3043G006W	CONNECTOR (MALE)	1	
PP3901	VJP3042G009W	CONNECTOR (MALE)	1	
PP4001	VJP3042G011W	CONNECTOR (MALE)	1	
PP4002, 03	VJP3186A018W	CONNECTOR (MALE)	2	
PP6706	VJP3042G020W	CONNECTOR (MALE)	1	
PS601	VJS3042F009W	CONNECTOR (FEMALE)	1	
PS2501	VJS3042F020W	CONNECTOR (FEMALE)	1	
PS3001	VJS3994	CONNECTOR (FEMALE)	1	
PS3002	VJP3884B060	CONNECTOR (MALE)	1	
PS3401, 02	VJS3043F015W	CONNECTOR (FEMALE)	2	
PS3501	VJS3043F015W	CONNECTOR (FEMALE)	1	
PS3901	VJS3042F016W	CONNECTOR (FEMALE)	1	
PS3902	VJS3042F014W	CONNECTOR (FEMALE) 14P	1	
PS3903	VJS3042F011W	CONNECTOR (FEMALE)	1	
PS3904	VJS3042F009W	CONNECTOR (FEMALE)	1	
PS4301, 02	VJS3186B018	CONNECTOR (FEMALE)	2	
PS6701	VJS3043F006W	CONNECTOR (FEMALE)	1	
Q2501	2SB1073	TRANSISTOR	1	
Q2506, 07	2SB1073	TRANSISTOR	2	
Q2509	2SB1073	TRANSISTOR	1	
Q3001	2SD1819	TRANSISTOR	1	
Q3002	2SB1218	TRANSISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q3003	2SD1819A	TRANSISTOR	1	
Q3004	2SD1819	TRANSISTOR	1	
Q3005	2SB1218	TRANSISTOR	1	
Q3151, 52	2SB1218	TRANSISTOR	2	
Q3201	2SB1218A-R	TRANSISTOR	1	
Q3202	2SC3931-C	TRANSISTOR	1	
Q3203, 04	2SD1819A	TRANSISTOR	2	
Q3401	MSD601-R	TRANSISTOR	1	
Q3402	MSB709-R	TRANSISTOR	1	
Q3403	MSD601-R	TRANSISTOR	1	
Q3404	2SB1218	TRANSISTOR	1	
Q3405	2SC3930	TRANSISTOR	1	
Q3406	2SA1532	TRANSISTOR	1	
Q3407	MSD601-R	TRANSISTOR	1	
Q3408	2SD1819	TRANSISTOR	1	
Q3501	MSC2295-B	TRANSISTOR	1	
Q3502	2SA1022	TRANSISTOR	1	
Q3503	2SD1819	TRANSISTOR	1	
Q3504	MSD601-R	TRANSISTOR	1	
Q3505	2SB1218	TRANSISTOR	1	
Q3506, 07	MSB709-R	TRANSISTOR	2	
Q3508	2SD1819	TRANSISTOR	1	
Q3601-06	2SD1996	TRANSISTOR	6	
Q3607	2SB956	TRANSISTOR	1	
Q3608	2SD1996	TRANSISTOR	1	
Q3610-12	MSD601-R	TRANSISTOR	3	
Q3613	2SD1991A	TRANSISTOR	1	
Q3614	2SD1996	TRANSISTOR	1	
Q3801, 02	2SB1218	TRANSISTOR	2	
Q3803	2SD1819	TRANSISTOR	1	
Q3806	MSD601-R	TRANSISTOR	1	
Q3808	2SD1819	TRANSISTOR	1	
Q3809	MSB709-R	TRANSISTOR	1	
Q3811	MSB709-R	TRANSISTOR	1	
Q3901, 02	MSB709-R	TRANSISTOR	2	
Q3903	XN6401	TRANSISTOR	1	
Q3904	MSD601-R	TRANSISTOR	1	
Q3905	XN6401	TRANSISTOR	1	
Q3906	MSD601-R	TRANSISTOR	1	
Q3908	MSB709-R	TRANSISTOR	1	
Q4001	2SK170BL	TRANSISTOR	1	
Q4002	MSB709-R	TRANSISTOR	1	
Q4003	2SD1992A	TRANSISTOR	1	
Q4004	MSD601-R	TRANSISTOR	1	
Q4005	2SB1320A	TRANSISTOR	1	
Q4301	2SD1468T93	TRANSISTOR	1	
Q4302	MSB709-R	TRANSISTOR	1	
Q4303-10	2SD601A	TRANSISTOR	8	
Q4311, 12	XN4501	TRANSISTOR-RESISTOR	2	
Q4313-15	2SD601A	TRANSISTOR	3	
Q6001	2SB970X	TRANSISTOR	1	
Q6201-04	MSD601-R	TRANSISTOR	4	
Q6401	MSD601-R	TRANSISTOR	1	
Q6701, 02	MSD601-R	TRANSISTOR	2	
Q6703	2SD1992A	TRANSISTOR	1	
Q6704	2SB956	TRANSISTOR	1	
Q6705	2SB948-Q	POWER TRANSISTOR	1	
Q6706, 07	2SD1996	TRANSISTOR	2	
Q7901	2SB1321A	TRANSISTOR	1	
Q7902	2SD1996	TRANSISTOR	1	
Q7905	2SD1996	TRANSISTOR	1	
Q7908	MSD601-R	TRANSISTOR	1	
Q30001	MSD601-R	TRANSISTOR	1	
Q30003	MSD601-R	TRANSISTOR	1	
Q30004	MSB709-R	TRANSISTOR	1	
Q30005	MSD601-R	TRANSISTOR	1	
Q30006, 07	MSB709-R	TRANSISTOR	2	
Q30008	MSD601-R	TRANSISTOR	1	
Q30009	MSB709-R	TRANSISTOR	1	
Q30010	2SD1819	TRANSISTOR	1	
Q30011	2SB1218	TRANSISTOR	1	
Q30012	MSD601-R	TRANSISTOR	1	
Q30014	2SD1819	TRANSISTOR	1	
QR2001, 02	UN5213	TRANSISTOR-RESISTOR	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR2003	UN5113	TRANSISTOR-RESISTOR	1	
QR2503	UN2215	TRANSISTOR-RESISTOR	1	
QR2508	UN2115	TRANSISTOR-RESISTOR	1	
QR3151, 52	UN5211	TRANSISTOR-RESISTOR	2	
QR3603	MUN2113	TRANSISTOR-RESISTOR	1	
QR3604	MUN2213	TRANSISTOR-RESISTOR	1	
QR3607	MUN2213	TRANSISTOR-RESISTOR	1	
QR3609	MUN2213	TRANSISTOR-RESISTOR	1	
QR3902	MUN2213	TRANSISTOR-RESISTOR	1	
QR3903	XN1213	TRANSISTOR-RESISTOR	1	
QR3904, 05	MUN2213	TRANSISTOR-RESISTOR	2	
QR4001	MUN2213	TRANSISTOR-RESISTOR	1	
QR4003	MUN2112	TRANSISTOR-RESISTOR	1	
QR4301	UN2119	TRANSISTOR-RESISTOR	1	
QR4302	MUN2212	TRANSISTOR-RESISTOR	1	
QR4303	MUN2213	TRANSISTOR-RESISTOR	1	
QR4701	MUN2213	TRANSISTOR-RESISTOR	1	
QR4702	MUN2212	TRANSISTOR-RESISTOR	1	
QR6001	UN5213	TRANSISTOR-RESISTOR	1	
QR6201-04	MUN2213	TRANSISTOR-RESISTOR	4	
QR6401-04	MUN2211	TRANSISTOR-RESISTOR	4	
QR6405	MUN2213	TRANSISTOR-RESISTOR	1	
QR6701	MUN2213	TRANSISTOR-RESISTOR	1	
QR6704	DTC144EA	TRANSISTOR-RESISTOR	1	
QR6705-10	MUN2213	TRANSISTOR-RESISTOR	6	
QR7902	MUN2211	TRANSISTOR-RESISTOR	1	
QR7905	XN1211	TRANSISTOR-RESISTOR	1	
QR7908	MUN2213	TRANSISTOR-RESISTOR	1	
QR30001, 2	MUN2211	TRANSISTOR-RESISTOR	2	
R603, 04	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	2	
R608-10	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	3	
R2001	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2002, 03	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	2	
R2006-21	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	16	
R2022-27	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	6	
R2028	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R2029-31	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R2032	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R2034	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R2035	ERJ3GEYJ220	M. RESISTOR CH 1/16W 22	1	
R2036	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R2037	ERJ3GEYJ560	M. RESISTOR CH 1/16W 56	1	
R2038	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R2039	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2040	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R2042	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2045	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2046	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2047	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2048	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2049	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R2050-52	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R2055-60	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	6	
R2061, 62	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R2063, 64	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	2	
R2065	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2066, 67	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	2	
R2070, 71	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R2073	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2074	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2076	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	1	
R2077	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R2079	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R2080	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R2081	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R2082	ERJ3RBD183	M. RESISTOR CH 3W 18K	1	
R2084	ERJ3RBD333	M. RESISTOR CH 3W 33K	1	
R2085, 86	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	2	
R2087, 88	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R2090	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2092	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R2099-02	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	4	
R2104-06	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R2111	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2112	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2113	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R2115	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2116	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2504	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2505	ERDS2TJ681	C. RESISTOR 1/4W 680	1	
R2513	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R2514	ERDS2TJ681	C. RESISTOR 1/4W 680	1	
R2523	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R2524	ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R2525-27	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	3	
R2528	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2534, 35	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2537	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R2538, 39	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R2540, 41	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R2543	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R2544	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R2545	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2546	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R2547	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R2548	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R2549	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R2550	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R2551	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R2552	ERJ6GEYG474	M. RESISTOR CH 1/10W 470K	1	
R2553	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R2554	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R2555	ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R2556	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3001	ERJ2RHD104	M. RESISTOR CH 2W 100K	1	
R3002	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3003	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3004	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3005, 06	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3007	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3008	ERJ3GEYJ302	M. RESISTOR CH 1/16W 3K	1	
R3009	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R3010	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3011, 12	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R3013	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3014	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3016	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3017	ERJ3GEYJ154	M. RESISTOR CH 1/16W 150K	1	
R3018	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R3019	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3020	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R3021	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3022	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R3023	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3024	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R3025	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3026	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R3027	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3028	ERJ3GEYJ183	M. RESISTOR CH 1/16W 18K	1	
R3030	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R3031	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3032	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R3033	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R3034	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3035	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3036	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3037	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3038, 39	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	2	
R3042	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3043	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3044	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3046	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3047	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R3048, 49	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	2	
R3050, 51	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	2	
R3052	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3053	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3054	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3055	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3057, 58	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3060, 61	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R3064	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3065	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3066, 67	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R3068	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3069, 70	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R3072	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3073	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3074	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3075	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3077	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3079	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R3080-82	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
R3083	ERJ2GE0R00	M. RESISTOR CH 2W 0	1	
R3084	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R3085	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3086	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3088	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3089, 90	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	2	
R3091	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R3092	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3094	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3095	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3097	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R3098-00	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R3101	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3117	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R3120-22	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	3	
R3123	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1	
R3151-57	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	7	
R3158	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R3159-63	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	5	
R3171-73	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	3	
R3174	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3175	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3176	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3177	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R3178	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R3179, 80	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R3201	ERJ2GEJ102	M. RESISTOR CH 2W 1K	1	
R3202	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3203	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R3204	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	1	
R3205	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R3206, 07	ERJ3GEYJ121	M. RESISTOR CH 1/16W 120	2	
R3208	ERJ3GEYG822	M. RESISTOR CH 1/16W 8.2K	1	
R3209	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R3210	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R3211	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R3212	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R3213	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R3214	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R3215	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R3217	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R3218	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R3219	ERJ3RBD222	M. RESISTOR CH 3W 2.2K	1	
R3220	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1	
R3221	ERJ3GEYJ391	M. RESISTOR CH 1/16W 390	1	
R3222	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R3223	ERJ3RBD222	M. RESISTOR CH 3W 2.2K	1	
R3224	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3225	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R3226	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R3227	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R3228	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R3229	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	1	
R3230	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R3233	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R3234	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R3235-37	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	3	
R3238	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R3239	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R3240, 41	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	2	
R3242, 43	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3245	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3248	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3249	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R3250	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3251	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3252	ERJ3RBD181	M.RESISTOR CH 3W 180	1	
R3253	ERJ3RBD301	M.RESISTOR CH 3W 300	1	
R3254	ERJ3RBD391	M.RESISTOR CH 3W 390	1	
R3255	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3257	ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R3258-62	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R3263	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3264-67	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R3401	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3402	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3403	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3404,05	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R3406	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R3407	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3408	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3409,10	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3411	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3412	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3413	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3414	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3415	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3416	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3417	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3418	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3419-21	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	3	
R3422	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3423	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3424	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3425	ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R3440	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3441	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R3442	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3443	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3444	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3445	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3501	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3502	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R3503	ERJ6GEYG271	M.RESISTOR CH 1/10W 270	1	
R3504	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3505	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3506	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3507	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3508-10	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3511,12	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R3514	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3516	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3517	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3518	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3519	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3520	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3524,25	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R3526	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3527	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R3528	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3530	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3531	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3532	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3533	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3534	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3535	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R3601	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R3602	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3604	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3606	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3607	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3610	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3613,14	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	2	
R3615	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R3616	ERJ6GEYG474	M.RESISTOR CH 1/10W 470K	1	
R3617	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3618	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R3619	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3620	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3621	ERJ6GEYG132	M.RESISTOR CH 1/10W 1.3K	1	
R3622	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3623	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3624	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3625	ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R3626	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	1	
R3627	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R3628	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R3629,30	ERJ6RBD512	M.RESISTOR CH 1/10W 5.1K	2	
R3631,32	ERDS2TJ181	C.RESISTOR 1/4W 180	2	
R3634	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R3635	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3638	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3639	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3644	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3649	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3650	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3651	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3652	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3653	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R3658,59	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R3660	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R3662	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R3663	ERJ6GEYG331	M.RESISTOR CH 1/10W 330	1	
R3664	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R3665	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3666	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R3667	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R3668	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R3669	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R3670	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R3671	ERJ6GEYG753	M.RESISTOR CH 1/10W 75	1	
R3672	ERJ6GEYG824	M.RESISTOR CH 1/10W 820K	1	
R3701	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3702	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3703	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3708	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3709	ERJ3RBD272	M.RESISTOR CH 3W 2.7K	1	
R3710	ERJ3RBD332	M.RESISTOR CH 3W 3.3K	1	
R3711	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R3715-18	ERJ3RED560	M.RESISTOR CH 3W 56	4	
R3719	ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R3720	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R3721-25	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5	
R3728-33	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	6	
R3735	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3736	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3737	ERJ3GEYJ270	M.RESISTOR CH 1/16W 27	1	
R3738	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3739,40	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3801	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3804	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3806	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3808	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3809	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3810	ERJ6RBD104	M.RESISTOR CH 1/10W 100K	1	
R3811	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R3812	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R3814	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3815	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3816	ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R3817	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R3818	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3819	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3820	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3821,22	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R3823	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R3824	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3825-27	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R3828	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3831	ERJ6GEYF561	M.RESISTOR CH 1/10W 560	1	
R3834	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3837	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R3901, 02	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	2	
R3905-08	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	4	
R3909, 10	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R3912, 13	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R3915, 16	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	2	
R3917	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3918	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3919	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R3920-22	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R3923	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R3924	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R3925, 26	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	2	
R3927	ERJ6RBD222	M. RESISTOR CH 1/10W 2.2K	1	
R3928	ERJ6RBD272	M. RESISTOR CH 1/10W 2.7K	1	
R3929	ERJ6RBD162	M. RESISTOR CH 1/10W 1.6K	1	
R3930	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R3931	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R3932	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R3933	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3938	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R3940	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3941	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R3942	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3943	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R3944	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R3945, 46	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	2	
R3948	ERJ6GEYG750	M. RESISTOR CH 1/10W 75	1	
R3952	ERJ6GEYJ224	M. RESISTOR CH 1/10W 220K	1	
R3955	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4004	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R4007	ERJ6GEYG153	M. RESISTOR CH 1/10W 15K	1	
R4008-14	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	6	
R4015, 16	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	2	
R4017	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4018, 19	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R4020	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4021	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R4022	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4023	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4024	ERJ6RBD471	M. RESISTOR CH 1/10W 470	1	
R4025	ERJ6RBD102	M. RESISTOR CH 1/10W 1K	1	
R4026, 27	ERJ6RBD202	M. RESISTOR CH 1/10W 2K	2	
R4028	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4029	ERJ6RBD201	M. RESISTOR CH 1/10W 200	1	
R4030	ERJ6GEYF333	M. RESISTOR CH 1/10W 33K	1	
R4031	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R4032	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R4033-35	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	3	
R4037	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4039	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R4040	ERJ6GEYF472	M. RESISTOR CH 1/10W 4.7K	1	
R4041, 42	ERJ6GEYG273	M. RESISTOR CH 1/10W 27K	2	
R4203, 04	ERJ3RBD103	M. RESISTOR CH 3W 10K	2	
R4205, 06	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4207-10	ERJ3RBD103	M. RESISTOR CH 3W 10K	4	
R4213, 14	ERJ3RBD103	M. RESISTOR CH 3W 10K	2	
R4215, 16	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4217, 18	ERJ3RBD103	M. RESISTOR CH 3W 10K	2	
R4219-22	ERJ3RBD472	M. RESISTOR CH 1/10W 4.7K	4	
R4223, 24	ERJ3RBD103	M. RESISTOR CH 3W 10K	2	
R4225, 26	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R4227, 28	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R4229-32	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	4	
R4233	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R4301	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4302	ERJ6RBD391	M. RESISTOR CH 1/10W 390	1	
R4303	ERJ6RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R4305	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4306, 07	ERJ6RBD183	M. RESISTOR CH 1/10W 18K	2	
R4308	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4309	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R4310	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4311	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4312	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4313	ERJ6GEYG183	M. RESISTOR CH 1/10W 18K	1	
R4314	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4315	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4316	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4317	ERJ6RBD123	M. RESISTOR CH 1/10W 12K	1	
R4318	ERJ6RED204	M. RESISTOR CH 1/10W 200K	1	
R4319	ERJ6RBD104	M. RESISTOR CH 1/10W 100K	1	
R4320	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4321	ERJ6RBD104	M. RESISTOR CH 1/10W 100K	1	
R4322	ERJ6RED204	M. RESISTOR CH 1/10W 200K	1	
R4323	ERJ6RBD273	M. RESISTOR CH 1/10W 27K	1	
R4324	ERJ6RBD751	M. RESISTOR CH 1/10W 750	1	
R4325	ERJ6RED204	M. RESISTOR CH 1/10W 200K	1	
R4326	ERJ6RBD112	M. RESISTOR CH 1/10W 1.1K	1	
R4327	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4328	ERJ6RED204	M. RESISTOR CH 1/10W 200K	1	
R4329	ERJ6GEYG331	M. RESISTOR CH 1/10W 330	1	
R4330	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4331	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R4332	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4333	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R4334	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4335	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4336	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4337	ERJ6RBD273	M. RESISTOR CH 1/10W 27K	1	
R4338	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R4339	ERJ6RBD363	M. RESISTOR CH 1/10W 36K	1	
R4340	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4342	ERJ6RBD683	M. RESISTOR CH 1/10W 68K	1	
R4343	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4344	ERJ6RBD683	M. RESISTOR CH 1/10W 68K	1	
R4345	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	1	
R4347	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R4348, 49	ERJ6GEYG681	M. RESISTOR CH 1/10W 680	2	
R4350	ERJ3GEYJ124	M. RESISTOR CH 1/16W 120K	1	
R4351	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4352	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4353	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R4354, 55	ERJ6RBD223	M. RESISTOR CH 1/10W 22K	2	
R4356	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4357	ERJ6RBD363	M. RESISTOR CH 1/10W 36K	1	
R4358	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4359	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4360	ERJ6RBD363	M. RESISTOR CH 1/10W 36K	1	
R4361	ERDAS3G680	M. RESISTOR 3W 68	1	
R4362	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4363	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4364	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	
R4365	ERDAS3G680	M. RESISTOR 3W 68	1	
R4366	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4367	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4368	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4369	ERJ3RBD513	M. RESISTOR CH 3W 51K	1	
R4370	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R4371	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4372	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R4373	ERJ3RBD513	M. RESISTOR CH 3W 51K	1	
R4374	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4375	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4376	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R4377	ERJ6RBD752	M. RESISTOR CH 1/10W 7.5K	1	
R4379	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4380	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4381	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R4382	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R4384	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R4385	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R4386	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R4387	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4388	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R4389	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R4390	ERJ6RBD103	M. RESISTOR CH 1/10W 10K	1	
R4391	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R4392	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R4393	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4394	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R4396	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
R4397	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4398	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R4401-03	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	3	
R4405-07	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	3	
R4701	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R4702	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R4703-13	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	11	
R4714	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4716	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4717	ERJ6GEYG560	M.RESISTOR CH 1/10W 56	1	
R4719	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R4720	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4721-24	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	4	
R4725	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4901-04	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	4	
R6001	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6003	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6006	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6008	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6009	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6010	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R6011	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R6012	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6013	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R6014	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R6015	ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R6016-18	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R6019-23	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R6024	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6025-28	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R6029	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6030	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6032-35	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R6036-38	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	3	
R6039-41	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
R6042	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R6043	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R6044	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R6045	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R6046	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6047	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R6048, 49	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	2	
R6050	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R6051	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R6052	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6053	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6054, 55	ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	2	
R6056, 57	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R6058-62	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	5	
R6063-65	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	3	
R6066	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6067	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R6068, 69	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	2	
R6070	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R6071	ERJ3GEYG223	M.RESISTOR CH 1/16W 22K	1	
R6072	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6073	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6074-79	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	6	
R6080	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6081-91	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	11	
R6092	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6093	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R6094	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6095	ERJ3GEYG223	M.RESISTOR CH 1/16W 22K	1	
R6096	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R6097	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6098	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6099	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6100	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R6101	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6102, 03	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	2	
R6105	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6106	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6201	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R6202-04	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R6205-08	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	4	
R6209-11	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	3	
R6212	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6213	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6214	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6215	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6218	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R6219	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6220	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6221	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6222	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6223, 24	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6225, 26	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	2	
R6227	ERJ6GEYF822	M.RESISTOR CH 1/10W 8.2K	1	
R6228	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6244	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R6245	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R6247	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6401-04	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	4	
R6405	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R6406	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6407-10	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	4	
R6411-16	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	6	
R6417	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R6418	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6419, 20	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R6421	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6422	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R6423	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6424, 25	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R6426	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6427, 28	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	2	
R6429-33	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R6434-37	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	4	
R6438	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R6439-45	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	7	
R6446	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6447-53	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	7	
R6454	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6455	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6456-58	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R6459-72	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	14	
R6701	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R6702	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R6703	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R6704	ERJ6RBD561	M.RESISTOR CH 1/10W 560	1	
R6705	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R6706	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6709-12	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	4	
R6713	ERJ6GEYF124	M.RESISTOR CH 1/10W 120K	1	
R6714, 15	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R6716, 17	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6718	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6719	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6720	ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R6721	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R6722, 23	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R6724	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R6725	ERJ6RBD151	M.RESISTOR CH 1/10W 150	1	
R6726	ERJ6RBD332	M.RESISTOR CH 1/10W 3.3K	1	
R6727-29	ERDS2TJ821	C.RESISTOR 1/4W 820	3	
R6730	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6731	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R6732, 33	ERJ6GEYG563	M.RESISTOR CH 1/10W 56K	2	
R6734	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
R6735	ERDS2TJ821	C.RESISTOR 1/4W 820	1	
R6736	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R6737	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R6737	ERJ6RBD392	M.RESISTOR CH 1/10W 3.9K	1	
R6738	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7901	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
R7904	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7906	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7912	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	1	
R7916	ERJ6GEYG821	M. RESISTOR CH 1/10W 820	1	
R7923, 24	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	2	
R7935	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R7937	ERDS2TJ151	C. RESISTOR 1/4W 150	1	
R7938	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R7939	ERDS2TJ151	C. RESISTOR 1/4W 150	1	
R7955-57	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	3	
R7958	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R30001	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30002-04	ERJ3GEYJ470	M. RESISTOR CH 1/16W 47	3	
R30005	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R30006	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30007, 08	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R30009	ERJ6GEYG562	M. RESISTOR CH 1/10W 5.6K	1	
R30010, 11	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	2	
R30012	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R30013	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R30014	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R30015	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R30016	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30017	ERJ6GEYG303	M. RESISTOR CH 1/10W 30K	1	
R30018	ERJ6GEYG101	M. RESISTOR CH 1/10W 100	1	
R30019	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R30020	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R30021, 22	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	2	
R30023, 24	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R30025	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R30026, 27	ERJ6GEYG391	M. RESISTOR CH 1/10W 390	2	
R30028	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R30029	ERJ6GEYG332	M. RESISTOR CH 1/10W 3.3K	1	
R30030	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R30031	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R30032	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R30033	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R30034	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R30035	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30038	ERJ6RBD392	M. RESISTOR CH 1/10W 3.9K	1	
R30039	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30040	ERJ6GEYG105	M. RESISTOR CH 1/10W 1M	1	
R30041	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R30042	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R30043	ERJ6GEYG223	M. RESISTOR CH 1/10W 22K	1	
R30044	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R30046	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R30047	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R30048	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30049	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R30050	ERJ6GEYG182	M. RESISTOR CH 1/10W 1.8K	1	
R30051	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R30052	ERJ6GEYG184	M. RESISTOR CH 1/10W 180K	1	
R30053	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30054	ERJ6GEYG272	M. RESISTOR CH 1/10W 2.7K	1	
R30055	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R30056	ERJ6GEYG392	M. RESISTOR CH 1/10W 3.9K	1	
R30057	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
R30058	ERJ6GEYF473	M. RESISTOR CH 1/10W 47K	1	
R30059	ERJ6GEYG154	M. RESISTOR CH 1/10W 150K	1	
R30061	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R30062	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
R30063	ERJ6GEYG564	M. RESISTOR CH 1/10W 560K	1	
R30066	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R30067	ERJ3GEYJ563	M. RESISTOR CH 1/16W 56K	1	
R30068	ERJ3GEYJ564	M. RESISTOR CH 1/16W 560K	1	
R30069	ERJ6GEYG683	M. RESISTOR CH 1/10W 68K	1	
R30070	ERJ3GEYJ243	M. RESISTOR CH 1/16W 24K	1	
R30071	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R30072	ERJ6GEYG752	M. RESISTOR CH 1/10W 7.5K	1	
R30073	ERJ6GEYG152	M. RESISTOR CH 1/10W 1.5K	1	
R30074-76	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	3	
R30077	ERJ6GEYG163	M. RESISTOR CH 1/10W 16K	1	
R30078	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R30079	ERJ6GEYJ751	M. RESISTOR CH 1/10W 750	1	
R30080	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R30081	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30082, 83	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R30084	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R30086	ERJ6GEYG102	M. RESISTOR CH 1/10W 1K	1	
T30001	VLQ0825	COIL	1	
TP3021	VJR0098	TEST POINT	1	
TP3801, 02	VJR0098	TEST POINT	2	
TP8021	VJR0098	TEST POINT	1	
TP30005, 06	VJR0098	TEST POINT	2	
VC3802	ECRJA020E11	TRIMMER 20P	1	
VR30001, 02	EVMEGSA00B14	V. RESISTOR 10K	2	
VR30004	EVMEGSA00B14	V. RESISTOR 10K	1	
X2001	VSX0847	CRYSTAL OSCILLATOR	1	
X2002	VSX0872	CRYSTAL OSCILLATOR	1	
X3003	VSX0846	CRYSTAL OSCILLATOR	1	
X3004	VSX0932	CRYSTAL OSCILLATOR	1	
X3151	VSX0848	CRYSTAL OSCILLATOR	1	
X3152	VSX1010	CRYSTAL OSCILLATOR	1	
X3501	VSX0365	CRYSTAL OSCILLATOR	1	
X3701	VSX0846	CRYSTAL OSCILLATOR	1	
X3801	VSX0365	CRYSTAL OSCILLATOR	1	
X4701	VSX0934	CRYSTAL OSCILLATOR	1	
X6001	VSX0847	CRYSTAL OSCILLATOR	1	
X6201	EFOEC7374A4	CRYSTAL OSCILLATOR	1	
X30001	VSX0365	CRYSTAL OSCILLATOR	1	
ZB2501	VJF0442	MINI CLAMPER	1	
ZB4001, 02	VMP4985	CARD CORNER HOLDER	2	
ZB6701, 02	VMP4985	CARD CORNER HOLDER	2	
		MISCELLANEOUS		
	VEE0C99	CABLE	1	P1102-P670
	VWJ1195	FLAT CARD CABLE	1	P7502-P790
	VWJ1196	FLAT CARD CABLE	1	P7501-P790
	VWJ1197	FLAT CARD CABLE	1	PS4851-P64
	VWJ1198	FLAT CARD CABLE	1	P4801-P400
	VSC4889	SHIELD CASE (B)	2	
	VSC4690	SHIELD CASE (T)	2	
	XTV3+6J	SCREW	6	
	VMZ2787	HEAT SINK SHEET	1	
	VMZ2788	HEAT SINK SHEET	1	
	VJH1074	REAR JACK	1	
■	VEP05351A	HEAD AMP C.B.A.	1	(RTL)
C5001-04	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	4	
C5007	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5010	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5013	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C5014	ECSTOJY106Z	T. CAPACITOR CH6.3V 10U	1	
C5015	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5016	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C5017	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5018	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C5019	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5020, 21	ECST1AY106Z	T. CAPACITOR CH 10V 10U	2	
C5022	ECUX1H220JCV	C. CAPACITOR CH 50V 22P	1	
C5023, 24	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C5025	ECSTOJY106Z	T. CAPACITOR CH6.3V 10U	1	
C5026	ECUX1H152KBV	C. CAPACITOR CH 50V 1500P	1	
C5027	ECUX1H330JCV	C. CAPACITOR CH 50V 33P	1	
C5028	ECUX1H122KBV	C. CAPACITOR CH 50V 1200P	1	
C5029	ECUX1A105ZFV	C. CAPACITOR CH 10V 1U	1	
C5030	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C5031	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C5032	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C5033	ECUX1H681JCV	C. CAPACITOR CH 50V 680P	1	
C5034	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5035	ECST1AY106Z	T. CAPACITOR CH 10V 10U	1	
C5036, 37	ECST0JY106Z	T. CAPACITOR CH6.3V 10U	2	
C5038	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5047	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C5051	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
FP5001	VJS3319B008	CONNECTOR (FEMALE)	1	
FP5002	VJS3251	CONNECTOR (FEMALE)	1	
IC5001	AN3731FHQ	IC	1	
L5002, 03	VLQ0163K220	COIL 22UH	2	
L5005-07	ELJPA100KF	COIL 10UH	3	
Q5002, 03	2SC3937	TRANSISTOR	2	
Q5005, 06	2SD1938F	TRANSISTOR	2	
R5002	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R5003	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5004	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5005	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R5010	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R5012	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5013	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R5014, 15	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	2	
R5016, 17	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	2	
R5018	ERJ3GEYJ680	M. RESISTOR CH 1/16W 68	1	
R5019	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
R5020	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5021	ERJ3GEYJ100	M. RESISTOR CH 1/16W 10	1	
R5024	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R5025	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	1	
R5026	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R5028	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R5029-32	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	4	
R5040, 41	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
		MISCELLANEOUS		
	VSC4698	SHIELD CASE (A)	1	
	■VEP02557A	MECHANISM DRIVE C.B.A.	1	(RTL)
C2701, 02	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C2703	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C2704	EEVHB1H2R2	E. CAPACITOR 50V 2.2U	1	
C2705	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C2706	ECUX1C474KBN	C. CAPACITOR CH 16V 0.47U	1	
C2707	ECUX1A104KBV	C. CAPACITOR CH 10V 0.1U	1	
C2708	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2709	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2710, 11	EEVHB1H2R2	E. CAPACITOR 50V 2.2U	2	
C2712, 13	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	2	
C2714, 15	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C2716-18	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	3	
C2719	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C2720-22	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	3	
C2723	EEVHB1A330	E. CAPACITOR 10V 33U	1	
C2724	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C2725	EEVHB1H2R2	E. CAPACITOR 50V 2.2U	1	
C2726	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C2727	ECUX1C474KBN	C. CAPACITOR CH 16V 0.47U	1	
C2728	ECUX1A104KBV	C. CAPACITOR CH 10V 0.1U	1	
C2729	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2730	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2731, 32	EEVHB1H2R2	E. CAPACITOR 50V 2.2U	2	
C2733, 34	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2735, 36	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C2737-39	ECUX1C333KBV	C. CAPACITOR CH 16V 0.033U	3	
C2740	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C2741-43	ECUX1H472KBV	C. CAPACITOR CH 50V 4700P	3	
C2745	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2747	ECUX1C474ZFN	C. CAPACITOR CH 16V 0.47U	1	
C2748	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2749	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C2751	ECUX1C474ZFN	C. CAPACITOR CH 16V 0.47U	1	
C2752	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2753	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2754	ECUX1H471JCV	C. CAPACITOR CH 50V 470P	1	
C2755	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2757	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C2758, 59	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	2	
C2760	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2762	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2763	ECUX1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C2764	ECUX0J225KBN	C. CAPACITOR CH6.3V 2.2U	1	
C2766	ECUX1E223KBV	C. CAPACITOR CH 25V 0.023U	1	
C2767	ECUX1C473KBV	C. CAPACITOR CH 16V 0.047U	1	
C2768	EEVHB1E4R7	E. CAPACITOR 25V 4.7U	1	
C2769-71	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3	
C2772-77	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	6	
C2778-80	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	3	
C2781, 82	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	2	
C2783	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2784-87	ECUX1H103KBV	C. CAPACITOR CH 50V 0.01U	4	
C2788	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C2789, 90	ECUX1H562KBV	C. CAPACITOR CH 50V 5600P	2	
C2791	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C2792	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C2793	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2794	ECUX0J225KBN	C. CAPACITOR CH6.3V 2.2U	1	
C2795	ECUX1H332KBV	C. CAPACITOR CH 50V 3300P	1	
C2796	ECUX1H562KBV	C. CAPACITOR CH 50V 5600P	1	
C2797	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C2798	ECUX1H562KBV	C. CAPACITOR CH 50V 5600P	1	
C2799, 00	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2	
C2801, 02	EEVHP1HR47	E. CAPACITOR 50V 47U	2	
C2803	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C2807, 08	EEVHB1C100	E. CAPACITOR 16V 10U	2	
C2809	EEVHB0J330	E. CAPACITOR 6.3V 33U	1	
C2810	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	1	
C2811	EEVHB0J330	E. CAPACITOR 6.3V 33U	1	
C6301-06	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	6	
C6307	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C6308-13	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	6	
C6314-16	ECUX1C104KBV	C. CAPACITOR CH 16V 0.1U	3	
C6317	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C6318-27	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	10	
C6328	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C6501	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6502	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C6504	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C6505	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1	
C6506	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6507	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C6509	EEVHB1C470	E. CAPACITOR 16V 47U	1	
C6510	ECUX1C224ZFV	C. CAPACITOR CH 16V 0.22U	1	
C6511, 12	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	2	
C6513	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C6515	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6516-18	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	3	
C6519	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6520	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	1	
C6522	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C6523-26	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C6527	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C6529	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C6530	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6531	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C6532	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C6534	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C6536	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6537	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6538	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C6539	ECUX1A105KBN	C. CAPACITOR CH 10V 1U	1	
C6541	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6542,43	EEVHB1H3R3	E. CAPACITOR CH 50V 3.3U	2	
C6544-47	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C6552-55	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4	
C6556,57	EEVHB1C470	E. CAPACITOR 16V 47U	2	
C6558	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C6559	EEVHB1C100	E. CAPACITOR 16V 10U	1	
C6565,66	EEVHB0J220	E. CAPACITOR 6.3V 22U	2	
D2713-16	MA856	DIODE	4	
D2717	MA8056-M	DIODE	1	
D6301	MA4051-L	DIODE	1	
D6302-09	AK04	DIODE	8	
D6310	MA142WK	DIODE	1	
D6311	MA4043-L	DIODE	1	
D6312-15	AK04	DIODE	4	
D6316	MA142WK	DIODE	1	
D6317	MA4043-L	DIODE	1	
D6318-34	MA142WK	DIODE	17	
D6501	AK04	DIODE	1	
D6502,03	MA721	DIODE	2	
D6511	MA721WK	DIODE	1	
IC2701	NJM2903M	IC	1	
IC2702	UPC4558G2	IC	1	
IC2703,04	AN3834K	IC	2	
IC2705	UPC4558G2	IC	1	
IC2706	NJM2903M	IC	1	
IC2707	NJM2904M	IC	1	
IC2708	TB6519F	IC	1	
IC2709	PU3210	TRANSISTOR	1	
IC2710	PU3110	TRANSISTOR	1	
IC2711	PU3210	TRANSISTOR	1	
IC2712	PU3110	TRANSISTOR	1	
IC2714	NJM2903M	IC	1	
IC2715	NJM2904M	IC	1	
IC6301-03	BA6219BFP-Y	IC	3	
IC6304	UPD4538BG	IC	1	
IC6305	NJM2903M	IC	1	
IC6306	UPD4538BG	IC	1	
IC6501,02	BA6887-V3	IC	2	
IC6503	NJM2904M	IC	1	
IC6504,05	UPC4558G2	IC	2	
IC6506-08	NJM2903M	IC	3	
IC6509,10	NJM2904M	IC	2	
IC6511	UPC4558G2	IC	1	
IC6512	M66010GP	IC	1	
IC6513	UPC4558G2	IC	1	
IC6514	ON1114.VT	PHOTO INTERRUPTER	1	
K2701,02	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
L2701,02	VLQ0599J680	COIL 68UH	2	
LB2702	VLP0145	CHIP INDUCTOR	1	
P2701,02	VJS3813B017	CONNECTOR (FEMALE)	2	
P2703	VJS3319B009	CONNECTOR (FEMALE)	1	
P2704	VJS3406B019	CONNECTOR (FEMALE)	1	
P2705	VJP1929T	CONNECTOR (MALE)	1	
P6301,02	VJP3518B002	CONNECTOR (MALE)	2	
P6303	VJP3518B003	CONNECTOR (MALE)	1	
P6501	VJP3518B002	CONNECTOR (MALE)	1	
P6502	VJP4044A002	CONNECTOR (MALE)	1	
P6503	VJP3172D002	CONNECTOR (MALE)	1	
P6504	VJS3537B026G	CONNECTOR (FEMALE)	1	
P6505	VJS3537B032G	CONNECTOR (FEMALE)	1	
P6506	VJP3125B002	CONNECTOR (MALE)	1	
P6507	VJP3172D002	CONNECTOR (MALE)	1	
P6508	VJP3172D004	CONNECTOR (MALE)	1	
P6509	VJS2959B008	CONNECTOR (FEMALE)	1	
P6510	VJP3172D002	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P6514	VJP3172D004	CONNECTOR (MALE)	1	
P6520	VJP3172D003	CONNECTOR (MALE)	1	
Q2701	2SD1328	TRANSISTOR	1	
Q2703,04	MSD601-R	TRANSISTOR	2	
Q6301	MSD601-R	TRANSISTOR	1	
Q6302	2SB1073	TRANSISTOR	1	
Q6303	MSD601-R	TRANSISTOR	1	
Q6304	2SB1073	TRANSISTOR	1	
Q6305	MSD601-R	TRANSISTOR	1	
Q6306	2SB1073	TRANSISTOR	1	
Q6307	2SB1073-R	TRANSISTOR	1	
Q6308	MSD601-R	TRANSISTOR	1	
Q6502	2SB709A	TRANSISTOR	1	
Q6503	2SB1073	TRANSISTOR	1	
Q6504	2SB710	TRANSISTOR	1	
Q6505	2SB1073	TRANSISTOR	1	
QR6301-03	XN1112	TRANSISTOR-RESISTOR	3	
QR6304,05	MUN2213	TRANSISTOR-RESISTOR	2	
QR6306-09	XN1213	TRANSISTOR-RESISTOR	4	
QR6314-16	MUN2213	TRANSISTOR-RESISTOR	3	
QR6317	UN221D	TRANSISTOR	1	
QR6318	XN4213	TRANSISTOR-RESISTOR	1	
QR6502	MUN2213	TRANSISTOR-RESISTOR	1	
QR6503	MUN2212	TRANSISTOR-RESISTOR	1	
QR6504	UN2211	TRANSISTOR-RESISTOR	1	
QR6508	XN1212	TRANSISTOR-RESISTOR	1	
QR6511	MUN2113	TRANSISTOR-RESISTOR	1	
QR6514	MUN2113	TRANSISTOR-RESISTOR	1	
QR6515	MUN2213	TRANSISTOR-RESISTOR	1	
QR6517	MUN2213	TRANSISTOR-RESISTOR	1	
R2701	ERJ3RBD273	M. RESISTOR CH 3W 27K	1	
R2703,04	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	2	
R2705	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R2706	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R2707	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R2710	ERJ3RBD473	M. RESISTOR CH 3W 47K	1	
R2711	ERJ3RBD823	M. RESISTOR CH 3W 82K	1	
R2712	ERJ3RBD153	M. RESISTOR CH 3W 15K	1	
R2713	ERJ3GEYJ330	M. RESISTOR CH 1/16W 33	1	
R2714,15	ERJ3GEYJ271	M. RESISTOR CH 1/16W 270	2	
R2716	ERJ14YJ330	M. RESISTOR CH 1/4W 33	1	
R2717	ERJ14YK2R2	M. RESISTOR CH 1/4W 2.2	1	
R2718	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R2719	ERJ3GEYG393	M. RESISTOR CH 1/16W 39K	1	
R2720-22	ERJ14YJ330	M. RESISTOR CH 1/4W 33	3	
R2723	ERJ14YK2R2	M. RESISTOR CH 1/4W 2.2	1	
R2724	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R2725	ERJ3GEYG393	M. RESISTOR CH 1/16W 39K	1	
R2726,27	ERJ14YJ330	M. RESISTOR CH 1/4W 33	2	
R2728,29	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R2730	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2731	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R2732	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R2733	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2734	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R2735	ERJ3GEYJ153	M. RESISTOR CH 1/16W 15K	1	
R2736	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R2737	ERJ3GEYG273	M. RESISTOR CH 1/16W 27K	1	
R2738	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R2739	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2740	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R2741	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R2742	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R2743	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2744	ERJ3GEYG222	M. RESISTOR CH 1/16W 2.2K	1	
R2745	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2747	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2748	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R2749	ERJ3GEYJ562	M. RESISTOR CH 1/16W 5.6K	1	
R2750	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R2751	ERJ8GEYJR33	M. RESISTOR CH 1/8W 0.33	1	
R2752	ERJ8GEYJR47	M. RESISTOR CH 1/8W 0.47	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2753	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R2754-56	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	3	
R2757	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R2758	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2760	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R2761	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2762	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R2763	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R2764	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R2765	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R2766	ERJ3GEYG392	M. RESISTOR CH 1/16W 3.9K	1	
R2768	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2769	ERJ3RBD153	M. RESISTOR CH 3W 15K	1	
R2770	ERJ3RBD823	M. RESISTOR CH 3W 82K	1	
R2771	ERJ3RBD473	M. RESISTOR CH 3W 47K	1	
R2772	ERJ3RBD102	M. RESISTOR CH 3W 1K	1	
R2773, 74	ERJ14YK2R2	M. RESISTOR CH 1/4W 2.2	2	
R2775	ERJ3RBD273	M. RESISTOR CH 3W 27K	1	
R2777	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R2778	ERJ3GEYG912	M. RESISTOR CH 1/16W 9.1K	1	
R2779	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R2780, 81	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R2782	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2783	ERJ3GEYG683	M. RESISTOR CH 1/16W 68K	1	
R2784	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R2786	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R2787	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R2788	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R2789	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2790	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2791	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R2792	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R2793	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R2794	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R2795	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2796	ERJ3RBD823	M. RESISTOR CH 3W 82K	1	
R2798	ERJ3RBD102	M. RESISTOR CH 3W 1K	1	
R2799	ERJ3GEYG154	M. RESISTOR CH 1/16W 150K	1	
R2800	ERJ8RQJR27	M. RESISTOR CH 1/8W 0.27	1	
R2801, 02	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	2	
R2803	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R2804	ERJ6GEYG122	M. RESISTOR CH 1/10W 1.2K	1	
R2805	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R2806	ERJ3GEYG333	M. RESISTOR CH 1/16W 33K	1	
R2807	ERJ3GEYG563	M. RESISTOR CH 1/16W 56K	1	
R2808	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R6301	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6302	ERJ14YJ561	M. RESISTOR CH 1/4W 560	1	
R6303-07	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	5	
R6308	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6309, 10	ERJ3GEYJ224	M. RESISTOR CH 1/16W 220K	2	
R6311	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6312, 13	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R6314	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6315	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6316, 17	ERJ3GEYJ333	M. RESISTOR CH 1/16W 33K	2	
R6318	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6319	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6320	ERJ3GEYJ473	M. RESISTOR CH 1/16W 47K	1	
R6321	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6322, 23	ERJ3GEYJ394	M. RESISTOR CH 1/16W 390K	2	
R6324-29	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	6	
R6330	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6331, 32	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	2	
R6333	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6334	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R6335	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6336	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	1	
R6337	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6338	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R6339	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	
R6340	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6341	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R6342	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R6343	ERJ3GEYJ151	M. RESISTOR CH 1/16W 150	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6344	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6345	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6346	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R6347-49	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	3	
R6501	ERJ3RBD123	M. RESISTOR CH 3W 12K	1	
R6502	ERJ3GEYG332	M. RESISTOR CH 1/16W 3.3K	1	
R6503	ERJ3GEYG154	M. RESISTOR CH 1/16W 150K	1	
R6504	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R6505	ERJ14YJ101	M. RESISTOR CH 1/4W 100	1	
R6506	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R6507	ERJ3GEYJ334	M. RESISTOR CH 1/16W 330K	1	
R6508	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R6509	ERJ3RBD332	M. RESISTOR CH 3W 3.3K	1	
R6510	ERJ3RBD153	M. RESISTOR CH 3W 15K	1	
R6511	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R6512	ERJ3RBD153	M. RESISTOR CH 3W 15K	1	
R6513	ERJ3RBD113	M. RESISTOR CH 3W 11K	1	
R6514	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6515	ERJ14YK3R9	M. RESISTOR CH 1/4W 3.9	1	
R6516-18	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R6519	ERJ3RBD472	M. RESISTOR CH 1/10W 4.7K	1	
R6520	ERJ3GEYJ823	M. RESISTOR CH 1/16W 82K	1	
R6521	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	1	
R6522	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R6523	ERJ3GEYJ182	M. RESISTOR CH 1/16W 1.8K	1	
R6524	ERJ14YK5R6	M. RESISTOR CH 1/4W 5.6	1	
R6525-27	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	3	
R6529	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R6530	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6532	ERJ3GEYG103	M. RESISTOR CH 1/16W 10K	1	
R6533, 34	ERJ3RED184	M. RESISTOR CH 3W 180K	2	
R6535	ERJ3GEYG123	M. RESISTOR CH 1/16W 12K	1	
R6536	ERJ3GEYG363	M. RESISTOR CH 3W 36K	1	
R6537, 38	ERJ3GEYG223	M. RESISTOR CH 1/16W 22K	2	
R6541	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R6542	ERJ3RBD103	M. RESISTOR CH 3W 10K	1	
R6543	ERJ3RBD392	M. RESISTOR CH 3W 3.9K	1	
R6544	ERJ3GEYJ273	M. RESISTOR CH 1/16W 27K	1	
R6545	ERJ3RBD104	M. RESISTOR CH 3W 100K	1	
R6546	ERJ3RBD103	M. RESISTOR CH 3W 10K	1	
R6547	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6548	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R6549	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	
R6550	ERJ3GEYG682	M. RESISTOR CH 1/16W 6.8K	1	
R6551	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6552	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R6553, 54	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R6555	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R6556, 57	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R6558	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R6559, 60	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R6561	ERJ3GEYJ184	M. RESISTOR CH 1/16W 180K	1	
R6562, 63	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	2	
R6564	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R6565	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R6566	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R6567	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6568	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R6569	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6570	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R6571	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R6572	ERJ3GEYJ105	M. RESISTOR CH 1/16W 1M	1	
R6573	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6574	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R6575	ERJ3RBD182	M. RESISTOR CH 3W 1.8K	1	
R6576, 77	ERJ3RBD223	M. RESISTOR CH 3W 22K	2	
R6578-80	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	3	
R6581-86	ERJ3GEYJ272	M. RESISTOR CH 1/16W 2.7K	6	
R6587-89	ERJ3GEYJ222	M. RESISTOR CH 1/16W 2.2K	3	
R6590	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6591	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R6592	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6593, 94	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	2	
R6595	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R6596	ERJ3GEYJ122	M. RESISTOR CH 1/16W 1.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6597	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R6598	ERJ3GEYG682	M.RESISTOR CH 1/16W 6.8K	1	
R6599	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R6600	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R6602	ERJ14YK3R3	M.RESISTOR CH 1/4W 3.3	1	
R6603,04	ERJ14YK5R6	M.RESISTOR CH 1/4W 5.6	2	
R6605	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6607	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6611-13	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R6614	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6615-17	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R6618	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
S6501	VSP1054	SWITCH	1	
S6502	VSP1055	SWITCH	1	
S6503	VSP1054	SWITCH	1	
S6504	VSS0512	SWITCH	1	
TP2701-04	VJR0098	TEST POINT	4	
TP6501-05	VJR0098	TEST POINT	5	
VR2701,02	EVMECSA00B12	V.RESISTOR 100	2	
VR6501	EVMEGSA00B24	V.RESISTOR 20K	1	
VR6502	EVMEGSA00B54	V.RESISTOR 50K	1	
		MISCELLANEOUS		
	VWJ26HW080MM	FLAT CARD CABLE	1	
	VWJ32HW080MM	FLAT CARD CABLE	1	
■	VEP07A05A	TIMER C.B.A.	1	(RTL)
B7501	CR2354-1GUF	BATTERY	1	
C7501,02	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7503	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7504	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C7505	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7506	ECEA1VKA100	E.CAPACITOR 35V 10U	1	
C7507	ECA1CKF560	E.CAPACITOR 16V 56U	1	
C7508	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7509	ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C7510	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C7513,14	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7515-18	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4	
C7519	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7520	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C7521	ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C7522	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7523	ECEA1AM101T	E.CAPACITOR 10V 100U	1	
C7524	ECEA0JKS331	E.CAPACITOR 6.3V 330U	1	
C7525,26	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	2	
C7527	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C7528	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7530	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7531	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7532	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7534	ECUM1H560JCN	CHIP 20125 (NPO)	1	
D7501	MA4130H	DIODE	1	
D7502,03	MA185	DIODE	2	
D7504	ERA22-02	DIODE	1	
D7505	MA4088	DIODE	1	
⚠ D7506	VSD0002	DIODE	1	
D7507	LN28RCPPU	DIODE	1	
D7509	MA700	DIODE	1	
D7510,11	RB441PT-77	DIODE	2	
D7512	11ES1	DIODE	1	
D7513-18	LN28RCPPU	DIODE	4	
D7517,18	LN31GCPHLMU	LED	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D7519,20	LN376GCPXUY	DIODE	2	
D7521,22	LN48YCPL	DIODE	2	
D7523,24	LN28RCPPU	DIODE	2	
D7532	LN28RCPPU	DIODE	1	
D7534	MA4056-H	DIODE	1	
DP7501	VSL0518	FIP	1	
IC7501	MN1874823	IC	1	
IC7502	M66010GP	IC	1	
IC7503	PST7043	IC	1	
IC7504	BA6138	IC	1	
IC7505	RN5RZ40BA	IC	1	
K7503	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
L7501	VLQ0599J101	COIL 100UH	1	
L7502	VLQ0599J220	COIL 22UH	1	
P7501	VJS3537B017G	CONNECTOR (FEMALE)	1	
P7502	VJS3537B019G	CONNECTOR (FEMALE)	1	
P7503	VJP1231T	CONNECTOR (MALE) 4P	1	
P7503	VJS1231T	CONNECTOR (FEMALE)	1	
P7504	VJS2183	CONNECTOR (FEMALE)	1	
P7601	VJS1231T	CONNECTOR (FEMALE)	1	
Q7501	2SD973B-R	TRANSISTOR	1	
QR7501-12	MUN2112	TRANSISTOR-RESISTOR	12	
QR7515,16	MUN2112	TRANSISTOR-RESISTOR	2	
QR7518-21	MUN2112	TRANSISTOR-RESISTOR	4	
R7501-05	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	5	
R7506	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7507	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R7508,09	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	2	
R7510	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R7511	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R7512	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7513	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R7514-19	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	6	
R7521	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7522	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R7524	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R7525	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R7526	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R7527-29	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	3	
R7530	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R7532	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7533	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	1	
R7534-38	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	5	
R7539	ERJ6GEYG273	M.RESISTOR CH 1/10W 27K	1	
R7540	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R7541	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R7549	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7550	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7551	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R7552	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7553	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R7554,55	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	2	
R7556	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R7557	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R7565-67	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	3	
R7568-71	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	4	
R7580-87	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	8	
R7589	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R7591	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7595	ERJ6GEYF333	M.RESISTOR CH 1/10W 33K	1	
R7596	ERJ6GEYG101	M.RESISTOR CH 1/10W 100	1	
S7501	VSP1053	SWITCH	1	
T7501	ETE13K95AY	TRANSFORMER	1	
VC7501	ECRLA010A53	V.RESISTOR 5K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
VR7501,02	EVMF6SA00B14	V.RESISTOR 10K	2	
X7501	VSX0666	CRYSTAL OSCILLATOR	1	
X7502	VSX0608	CRYSTAL OSCILLATOR	1	
ZB7501-08	VMD0504	LED HOLDER	6	
ZB7507,08	VMX1932	LED SPACER	2	
ZB7509-14	VMD0504	LED HOLDER	6	
ZB7515	VJF1318	FIP HOLDER	1	
		MISCELLANEOUS		
	VEE0C27	CABLE	1	P7601-P750
■	VEP03E91A	FRONT (L) C.B.A.	1	(RTL)
C4851	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4852	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4853	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4854	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4855	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
IR4851	RPM6937-V11	REMOTE CONTROL RECEIVER	1	
JK4851	VEJ1734	FRONT JACK	1	
PS4851	VJS3537B022G	CONNECTOR (FEMALE)	1	
Q4851	XN6401	TRANSISTOR	1	
Q4852	MSD601-R	TRANSISTOR	1	
Q4853	XN6401	TRANSISTOR	1	
Q4854	MSD601-R	TRANSISTOR	1	
QR4851	MUN2213	TRANSISTOR-RESISTOR	1	
R4851-53	ERJ6GEYG750	M.RESISTOR CH 1/10W 75	3	
R4854	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R4855	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R4856	ERJ6GEY0223	M.RESISTOR CH 1/10W 22K	1	
R4857	ERJ6RBD222	M.RESISTOR CH 1/10W 2.2K	1	
R4858	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4859	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R4860	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4861	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4863	ERJ6GEYF393	M.RESISTOR CH 1/10W 39K	1	
R4864	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R4865	ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R4866,67	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4868	ERJ6GEYF473	M.RESISTOR CH 1/10W 47K	1	
R4869	ERJ6GEYG104	M.RESISTOR CH 1/10W 100K	1	
R4870	ERJ6RBD272	M.RESISTOR CH 1/10W 2.7K	1	
S4851	EVQ11407K	SWITCH	1	
S4852	ESD170306	SWITCH	1	
S4853	VSR0221	SWITCH	1	
W4801	VWJ0119	JUMPER	1	
ZB4851	VMD2247	INFRA HOLDER	1	
ZB4852	VGU7654	SLIDE KNOB	1	
ZB4853	VGU7652	MIC KNOB	1	
ZB4854	VGF0740	VC SHEET	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP04728A	FRONT (R) C.B.A.	1	(RTL)
C4801	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4802	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4804	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4805	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C4807	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4808	ECQV1H473JL	P.CAPACITOR 50V 0.047U	1	
C4809,10	ECEA1AKS220	E.CAPACITOR 10V 22U	2	
C4811-13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	3	
C4814-16	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4817	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D4801	MA165	DIODE	1	
D4802	LN476YCPX	DIODE	1	
D4803	MA4056-H	DIODE	1	
IC4801	NJM4565MD	IC	1	
JK4801	VJJ0264	HEADPHONE JACK	1	
JK4802	VJJ0263	MIC JACK	1	
P4801	VJS3537B018G	CONNECTOR (FEMALE)	1	
Q4801	2SD602A-R	TRANSISTOR	1	
QR4801	MUN2113	TRANSISTOR-RESISTOR	1	
R4801	ERJ6GEYG392	M.RESISTOR CH 1/10W 3.9K	1	
R4802	ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	1	
R4803	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4804	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4805	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R4806	ERJ6GEYF472	M.RESISTOR CH 1/10W 4.7K	1	
R4807,08	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	2	
R4809	ERJ6GEYG154	M.RESISTOR CH 1/10W 150K	1	
R4810	ERJ6GEYG151	M.RESISTOR CH 1/10W 150	1	
R4811	ERJ6GEYG683	M.RESISTOR CH 1/10W 68K	1	
R4812	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R4813	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R4814	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R4815	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R4816	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R4817	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R4818	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R4819	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R4820	ERJ6RBD162	M.RESISTOR CH 1/10W 1.6K	1	
R4821	ERJ6RBD471	M.RESISTOR CH 1/10W 470	1	
R4822	ERJ6GEYG122	M.RESISTOR CH 1/10W 1.2K	1	
R4823	ERJ6RBD101	M.RESISTOR CH 1/10W 100	1	
R4824	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R4825,26	ERJ6GEYG332	M.RESISTOR CH 1/10W 3.3K	2	
R4827	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R4828	ERJ6GEYF123	M.RESISTOR CH 1/10W 12K	1	
S4801-06	EVQ11407K	SWITCH	6	
VR4801	EVJYMOF15C23	V.RESISTOR 2K	1	
VR4802	EWANYJX1054J	V.RESISTOR 1.05M	1	
VR4803	EVJ021F1554J	V.RESISTOR 1.55M	1	
W1	VWJ0119	JUMPER	1	
ZB4801	VGU7650	VOLUME KNOB	1	
ZB4802,03	VGU7653	REC LEVEL KNOB	2	
ZB4804	VGU7652	MIC KNOB	1	
ZB4805	VMD2326	REFLECTOR	1	
ZB4806	VGF0208	REC VR SHEET	1	
ZB4807	VKM3673	REC VOL PLATE	1	
ZB4808	VGF0740	VC SHEET	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
■	VEP07966A	MODULAR C.B.A.	1	(RTL)
JK7601	VJJ0587	4P MODULAR JACK	1	
P7601	VJP1231T	CONNECTOR (MALE) 4P	1	
		MISCELLANEOUS		
	VMX1021	SPACER	1	
■	VEP07965A	FRONT LED C.B.A.	1	(RTL)
D7751	LN01301C	DIODE	1	
D7752,53	LN01801C	LED	2	
D7754	LN01301C	DIODE	1	
P7751	VJP1244T	CONNECTOR (MALE) 4P	1	
P7752	VJS3537B009G	CONNECTOR (FEMALE)	1	
■	VEP07968A	IR C.B.A.	1	(RTL)
C7701,02	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	2	
D7701,02	MA4056-H	DIODE	2	
LB7701	VLP0196	COIL	1	
P7701	VJR1044	CONNECTOR	1	
P7751	VJS1231T	CONNECTOR (FEMALE)	1	
■	VEP03E18A	5P JACK C.B.A.	1	(RTL)
JK3781	VJJ0567	JACK	1	
P3781	VJP1244T	CONNECTOR (MALE) 4P	1	
■	VEP07967A	DV JACK C.B.A.	1	(RTL)
JK7651	VJJ0568	DV JACK	1	
P7651	VJP1246T	CONNECTOR (MALE) 6P	1	
■	VEP01839A	POWER C.B.A.	1	(RTL)
⚠ C1120,21	ECQU2A333MN	P.CAPACITOR 100V 0.033U	2	
⚠ C1123	VCK0286E222	C.CAPACITOR 2200P	1	
⚠ C1124,25	VCK0286E102	C.CAPACITOR 1000P	2	
C1140	ECA2EGE101W	E.CAPACITOR 250V 100U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1150	VCEA1EJH121	E.CAPACITOR 25V 120U	1	
C1151	ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C1152	VCEA1HJH560	E.CAPACITOR 50V 56U	1	
C1153	VCK0106K222	C.CAPACITOR 2200P	1	
C1180	VCEA1AJC101	E.CAPACITOR 10V 100U	1	
C1200,01	ECQB1H333JF	P.CAPACITOR 50V 0.033U	2	
C1230	VCEA1HJH560	E.CAPACITOR 50V 56U	1	
C1240	VCEA0JJH272	E.CAPACITOR 6.3V 2700U	1	
C1241	VCEA0JJH331	E.CAPACITOR 6.3V 330U	1	
C1250	VCEA1CJH152	E.CAPACITOR 16V 1500U	1	
C1251	VCEA1CJH331	E.CAPACITOR 16V 330U	1	
C1260	VCEA1AJH152	E.CAPACITOR 10V 1500U	1	
C1261	VCEA1AJH681	E.CAPACITOR 10V 680U	1	
C1340	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1341	VCEA1CJC470	E.CAPACITOR 16V 47U	1	
C1350	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1351	VCEA1AJC470	E.CAPACITOR 10V 47U	1	
C1360	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C1361	VCEA1AJC470	E.CAPACITOR 10V 47U	1	
⚠ D1110	ERZVA5Z221	DIODE	1	
D1140	S1WBA80	DIODE	1	
D1150	ERA22-02	DIODE	1	
D1151	1SS254	DIODE	1	
D1152	MA723	DIODE	1	
D1153	1SS254	DIODE	1	
D1180	1SS254	DIODE	1	
D1182	1SS254	DIODE	1	
D1200	MA4056-H	DIODE	1	
D1230	ERA22-02	DIODE	1	
D1240	FMB-24H	DIODE	1	
D1250	FML-G12SP	DIODE	1	
D1260	FMB-24H	DIODE	1	
D1340	ERA22-02	DIODE	1	
D1341	MA4130L	DIODE	1	
D1350	MA4056-H	DIODE	1	
D1360	MA4056-L	DIODE	1	
D1361	1SS254	DIODE	1	
⚠ F1101	XBA1C16NU100	FUSE	1	
⚠ IC1150	STRS6705LF	IC	1	
⚠ IP1340	UNH000300A	IC	1	
⚠ L1120,21	VLF1349N0R7	COIL	2	
L1240	VLQ0655K220	COIL	1	
L1250	VLQ0655K220	COIL	1	
L1260	VLQ0655K220	COIL	1	
LB1210-14	VLP0056	BEADS CORE	5	
⚠ P1101	VJS2985	CONNECTOR (FEMALE)	1	
P1290	VJP1393T	CONNECTOR (MALE) 13P	1	
Q1180,81	2SD1991-R	TRANSISTOR	2	
Q1182	2SB1320A-R	TRANSISTOR	1	
⚠ Q1200	PS2561L1-1	PHOTO CUPPLER	1	
Q1201	2SD1991-R	TRANSISTOR	1	
Q1340	2SD1273P	TRANSISTOR	1	
Q1350	2SD1996-R	TRANSISTOR	1	
Q1360	2SD1996-R	TRANSISTOR	1	
R1150	ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
R1151	ERDS2FJ682	C.RESISTOR 1/4W 6.8K	1	
R1152	ERDS2FJ153	C.RESISTOR 1/4W 15K	1	
R1153	ERDS2FJ270	C.RESISTOR 1/4W 27	1	
R1154	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R1155	ERX1SJR68	M.RESISTOR 1W 0.68	1	
R1156	ERDS2FJ561	C.RESISTOR 1/4W 560	1	
R1157	ERDS2FJ331	C.RESISTOR 1/4W 330	1	
R1158	ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1159	ERDS2FJ331	C.RESISTOR 1/4W 330	1	
R1160	ERDS2FJ2R7	C.RESISTOR 1/4W 2.7	1	
R1180,81	ERDS2FJ471	C.RESISTOR 1/4W 470	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1185	ERDS2FJ473	C. RESISTOR 1/4W 47K	1	
R1186	ERDS2FJ683	C. RESISTOR 1/4W 68K	1	
R1200. 01	ERQS2CKG8201	M. RESISTOR 1/4W 8. 2K	2	
R1202	ERQS2CKG2702	M. RESISTOR 1/4W 27K	1	
R1203	ERDS2TJ153	C. RESISTOR 1/4W 15K	1	
R1204	ERDS2TJ562	C. RESISTOR 1/4W 5. 6K	1	
R1205	ERDS2TJ182	C. RESISTOR 1/4W 1. 8K	1	
R1206	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R1340	ERDS1TJ392	C. RESISTOR 1/2W 3. 9K	1	
R1351	ERDS2TJ821	C. RESISTOR 1/4W 820	1	
R1360	ERDS2TJ821	C. RESISTOR 1/4W 820	1	
⚠ T1150	VLT0936	TRANSFORMER	1	
ZA1101	VMP5896	INRET ANGLE	1	
ZA1102	VHD0418	SCREW	1	
ZA1103. 04	TP00351-51	FUSE CLIP	2	
ZA1105. 06	XSN3+8FZ	SCREW	2	
ZA1107	XTV4+8F	SCREW	1	
ZA1108	XWC4BFX	WASHER	1	
⚠ ZA1109	VEE9289	POWER EARTH	1	
ZA1110	VSC3941	HEAT SINK	1	
⚠ ZB1101	VQL7021	FUSE	1	
■	UR57VPB623	EDITING CONTROL C. B. A.	1	(RTL)
C1	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C2	EZJS2VB223Z	CAPACITOR	1	
C4	ECUM1E104ZFN	C. CAPACITOR CH 16V 0. 1U	1	
C5, C6	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C7, C8	ECUX1H101KCN	C. CAPACITOR CH 50V 100P	2	
C10	ECUM1E104ZFN	C. CAPACITOR CH 16V 0. 1U	1	
C11	ECUX1H221KCQ	C. CAPACITOR CH 50V 220P	1	
C12, 13	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C14	EZJS2VB223Z	CAPACITOR	1	
C15	ECUM1E104ZFN	C. CAPACITOR CH 16V 0. 1U	1	
D1, D2	1SS294	DIODE	2	
D4-D6	MA152	DIODE	3	
D9	1SS294	DIODE	1	
IC1	M34510M4194T	IC	1	
IC2	RH5VL20AA	IC	1	
LED1, D2	SE1003E	LED	2	
LED3	L1261CALU	LED	1	
Q1	2SB1188	TRANSISTOR	1	
Q2	MSD601-R	TRANSISTOR	1	
Q3	MSB709	TRANSISTOR	1	
Q4, Q5	MSD601-R	TRANSISTOR	2	
R1, R2	ERJ8GEYJ1R8	M. RESISTOR CH 1/8W 1. 8	2	
R3, R4	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	2	
R5	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R6	ERJ6GEUJ271	M. RESISTOR CH 1/10W 270	1	
R8-14	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	7	
R15	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
R19, 20	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	2	
R22	ERJ6GEYG470	M. RESISTOR CH 1/10W 47	1	
R23, 24	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	2	
R25	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R26-28	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	3	
R29	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	
R31, 32	ERJ6GEYG271	M. RESISTOR CH 1/10W 270	2	
R33-36	ERJ6GEYG682	M. RESISTOR CH 1/10W 6. 8K	4	
R37	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R38	ERJ6GEYF472	M. RESISTOR CH 1/10W 4. 7K	1	
R39	ERJ6GEYG104	M. RESISTOR CH 1/10W 100K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
SW1	ESD10606	SLIDE SWITCH	1	
VR1	EVQWM2001	ENCODER	1	
X1	CSB990J	OSCILLATOR	1	
		MISCELLANEOUS		
	UR57TD627	(-) BATTERY TERMINAL	1	
	UR57TD628	(+) BATTERY TERMINAL	1	
	SS6444FLS	MODULAR JACK	1	
	VJR1005	OUTSIDE TERMINAL (4PIN)	1	
	UR57JP639	JUMPER WIRE (4PIN)	1	
	UR57JP637A	JUMPER WIRE (7PIN)	1	
	UR57JP638A	JUMPER WIRE (12PIN)	1	

SERVICING FIXTURES & TOOLS

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	VFK1409	MEASURING BOARD	1	
	VFK1410	CONNECTION BOARD	1	
	VFK1317	30PIN FLAT CABLE	1	NEEDS 2 CABLES
	VFK1405	AUDIO EXTENDER BOARD	1	
	VFK1406	DIGITAL EXTENDER BOARD	1	
	VFK1407	Y/C EXTENDER BOARD	1	
	VFK1408	MOTOR EXTENDER BOARD	1	
	VJA0941	DC CABLE	1	FOR MEASURING BOARD
	VFK1436	14PIN EXTENDER CABLE	1	
	VFK1448	12PIN EXTENDER CABLE	1	
	VFK1445	26PIN FLAT CABLE	1	
	VFK1446	32 FLAT CABLE	1	
	VFK0849	20PIN FLAT CABLE	1	
	VFK1484	EVR SOFTWARE	1	
	VFM3010EDS	ALIGNMENT TAPE(COLOR BAR)	1	
	VFK1348A	NEUTRAL PLATE	1	
	VFK1450	POST HEIGHT FIXTURE	1	
	VFK1151	BOX DRIVER	1	
	VFK1149	POST DRIVER	1	
	VFK1188	DIAL TENSION GAUGE	1	
	VFK1217	49% SENSOR CASSETTE	1	
	VFK1426	6% SENSOR CASSETTE	1	
	VFK1155	NEUTRAL POSITION TOOL	1	REV/WHITE
	VFK1156	NEUTRAL POSITION TOOL	1	PLAY/BLACK
	VFK1208	NEUTRAL POSITION TOOL	1	NEUTRAL/BLACK W/HOLE

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks